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THE CONSTRUCTION AND EVALUATION OF EXERCISES FOR SPECIFIC TRAINING IN AUDITORY AND VISUAL DISCRIMINATION IN THIRD AND FOURTH GRADES

Submitted by

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(Ed.B., Rhode Island College of Education, 1938)

In partial fulfillment of requirements for
the degree of Master of Education

1945

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The Construction and Evaluation of Exercises for Specific Training in Auditory and Visual Discrimination in Third and Fourth Grades

Acknowledgments

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Introduction

It is the purpose of this study to build exercises for specific training in auditory and visual perception and to evaluate their effect on increased ability to hear and see likenesses and differences in words and word elements. The experiment was done with third and fourth grade children in a normal school population.

Donald D. Durrell says,[1]

> There is ample evidence....to indicate the need for instruction in word analysis. Such evidence includes the complete inability of some children to solve new words, random guessing at new words without regard to word form or meaning and various ineffective habits of attack on new words such as mere sounding by letters and syllables. Some bright children may acquire the facility to notice the visual and auditory elements of words and hence need no formal instruction in word analysis. However, the majority of children are aided by special practice to increase the accuracy and fluency of both visual and auditory perception of sound elements.

Arthur I. Gates[2] states that,

> The abilities to see similarities and differences among words; to identify letters, phonograms and syllables in words; to translate these letters or letter combinations into sounds; and to combine these visual elements or sound units into whole word forms have long been recognized as useful reading skills.

1. Durrell, Donald D., Improvement of Basic Reading Abilities, (New York: World Book Co., 1940), p.198
2. Gates, Arthur I., Interest and Ability in Reading, (New York: The MacMillan Co., 1930), p.200

Paul McKee[1] concludes from a survey of investigations on word recognition that children must acquire effective means of recognizing new words. He says,

> While there is no intimation here that phonetic training will do a perfect and complete job, there are many indications that the right phonics will be helpful in attacking new words of a phonetic character. There are, however, certain principles that the teacher must keep in mind, as follows:
>
> 1. Phonics is only one tool in attacking strange words.
> 2. Phonetic analysis is not a method of teaching children to read. It is merely a tool to be used in recognizing new words.
> 3. Drill in word analysis must not be emphasized to the point that the child fails to read for meaning.
> 4. The phonetic training provided should be that which the child needs most in actual reading situations.
> 5. Training in phonics should occur outside the regular reading period.

According to A. I. Gates[2] who has done a great deal of study in the field of reading is found:

> In American schools the favorite method of assisting the pupil to acquire a reading knowledge of new words is to teach him to work out the pronunciation by identifying and blending phonetic elements. Children are taught to analyze the visual word into its constituent elements, of which there are many varieties, some used by one system, some by others....There can be little doubt of the value of this type of skill when it is adequately and economically acquired. Phonetic skill is of service in many instances, expecially in dealing with the highly phonetic words. The phonetic attack, however has limitations. The great

1. McKee, Paul, Reading and Literature in the Elementary School, (Boston: Houghton Mifflin Co., 1934), pp. 192-93.

2. Gates, A. I., The Improvement of Reading, (New York: The MacMillan Co., 1935), pp. 237-39.

> mistake in American teaching has been the assumption that phonetic skill was all-important and sufficient, that the other types of training could be neglected.... Thus phonetic practice in moderation is useful; in less degree it leaves the pupil handicapped; in greater degree it may result in serious deficiency.

From many studies it may be concluded that proper teaching of word analysis should increase the ability of many pupils to attack new words.

Each exercise used in this study was planned to teach both visual and auditory perception. The exercises included the following word elements:

a. Initial consonants.

b. Final consonants.

c. Initial and final blends.

d. Rhyming words.

e. Various common word elements as ai, ea, oa.

The effect of specific exercises in word analysis in the third and fourth grades was measured by thé following factors:

1. Effect on auditory discrimination.

2. Effect on visual discrimination.

Chapter 1

Summary of Previous Research

The method of teaching phonics has changed greatly in the last fifteen years. The early idea of letter-by-letter sounding and stressing of family groups was found to be inadequate because many children did not transfer the skills learned to an actual reading situation. The next phase was to drop the teaching of word analysis entirely and teach by the word comparison method. This method also was found to be unsatisfactory as children tended to guess at words without any thought of the context in which the word was found or to the configuration of the word. At present practically all reading investigators believe that proper phonics instruction is an aid to better reading although only one means a child may use in deciphering new words he encounters in his reading.

The following taken from E. W. Dolch[1] states that, "If the teacher does not teach some system of sounding words, the bright children will discover a system of their own and many times not a very good one. Consequently we must have some phonic system".

Most systems of reading taught in our schools today provide a plan for teaching phonics. It is usual for the first and second grade teachers to emphasize phonics but many times the third and fourth grade instructors believe that

1. Dolch, E. W., The Psychology and Teaching of Reading, (Boston: Ginn & Co.,1931, pp. 109-110

word analysis has already been taught hence unnecessary to be carried further.

Donald D. Durrell[1] reports from his experience that "Instruction in word analysis should be continued in the intermediate grades. Children should be taught to recognize similarities and differences in word parts." Again Durrell[2] says, "Word analysis is an aggregate of transfer skills to be applied in reading as the need arises. Moreover, there are graded steps in acquisition of the several skills and certain levels of proficiency should be attained in different grades as the child progresses in his reading ability and finds new needs for analysis".

E. A. Betts[3] states that "Word mastery involves the analysis of word forms and acquiring knowledge of word meanings. The learner should have enough skill in word analysis to make for rapid visual discrimination".

The following conclusions were taken from an experimental study by S. C. Garrison and M. T. Heard:[4]

1. Training in phonetics makes children more independent in the pronunciation of words.
2. For all children phonetic training seems to be more effective in the latter half of the third grade.

1. Durrell, Donald D., Improvement of Basic Reading Abilities (New York: World Book Co.,1940), p. 202
2. Ibid. p. 200
3. Betts, E. A.,The Prevention and Correction of Reading Difficulties (New York:Row Peterson & Co.,1936), p 200-226
4. Garrison, S.C.&M. T. Heard, "An Experimental Study of the Value of Phonetics". Peabody Journal of Education, July 1931, p. 9-14

3. In the teaching of reading it seems probable that much of the phonetic training now given should be deferred till the second and third grades.
4. Children who have had training in phonetics have some advantage in learning to spell over children without such training.

Again from a study by Kathleen B. Hester[1] who concludes from her experiment the following:

> The frequency of errors in sounds and blends among children who had had difficulty in reading and high percentage of children who lacked partially or entirely the knowledge of phonics essential to independent word attack should certainly lead teachers to examine instructional programs in reading....Phonetic difficulties from this study were most evident at the fourth and fifth grade levels, but began in the second and third grades....Skill in word analysis does not come without specific training. Without this training the child is handicapped severely.

From Dolch[2] comes the following excerpt:

> The goal of phonic teaching is to give all children the means of pronouncing for themselves the host of new words which they will at some time meet and have to learn unaided.
> The first step in phonic teaching is necessarily training of the ear to hear the letter sounds which familiar words contain.

Again from Dolch[3]:

> All training in word recognition must lead to the habit of visual analysis of words or careful looking for prominent letters. Children can soon learn that when a word is not at once familiar they should 'look it over' carefully. There is no danger that this habit will slow up reading too much since it is a habit of analysis when the word is not recognized. When it is recognized at once there will be little analysis. If children trained in this way

1. Hester, Kathleen B., "A Study of Phonetic Difficulties in Reading", Elementary School Journal, Nov.1942 p. 173.
2. op.cit., p. 96.
3. Ibid., pp. 108-09

> are a little slower than others it is only that they are careful readers and not hasty readers. Which type do we wish to produce?

In a study by Acomb[1] he concludes that visual and auditory discrimination, perception and associability are highly significant factors in relation to reading ability.

From a study made in visual and auditory discrimination in first grade reading with a large school population Dr. Helen A. Murphy[2] concludes that special training in visual and auditory perception of words proves of appreciable value upon beginning reading.

It is the purpose of the writer in this study to show through specific training exercises in visual and auditory discrimination in third and fourth grades that such training will increase ability in word analysis.

1. Acomb, Allan, "Study of the Psychological Factors in Reading and Spelling", Unpublished Ed. M. Thesis, Boston University School of Education, 1936.
2. Murphy, Helen A., "Evaluation of the Effect of Specific Training in Auditory and Visual Discrimination of Beginning Reading", Unpublished Ed. D. Thesis Boston University School of Education, 1943.

Chapter 2

Description of Materials

Although pupils in most school systems are taught word analysis in the first and second grades there are many reading failures and cases where reading ability is not commensurate with mental age found in the third and fourth grades. Part of this failure is no doubt due to inadequate skill in auditory and visual discrimination. As a usual thing word analysis is a minor consideration in the teaching of reading skills in these grades. Therefore it is the purpose of this study to measure the effectiveness of specific training in visual and auditory perception under regular classroom conditions with a normal school population in the third and fourth grades.

The carrying out of the experiment involved the development of the exercises, the administration of the experiment and the assistance of the school department in the town where the writer was teaching.

The first plans for the building of the materials were set up in outline form to be taught in thirty lessons. The writer considered twenty minutes a day the minimum time in which lessons including both auditory and visual training could be effective, consequently this time limit was selected. As all the teaching was to be done by the writer it was

possible to plan the first exercises so they could be terminated at the end of the twenty minute period. After a lesson or two the time could be gauged very closely. After the teaching was begun it was found that certain word elements would need more reviewing than was thought necessary in the first plans, so the exercises were constructed a few at a time with the needs of these particular children constantly kept in mind.

As two holidays came during the six week period of the teaching it was considered necessary to reduce the teaching days to twenty-eight in order to finish the testing during the current month.

The various letters, combinations of letters and phonograms to teach were obtained from the analysis of the errors made on the preliminary auditory test (a complete copy of which may be found in Appendix A page 45) and on the spelling portion of the Durrell-Sullivan[1] Reading Achievement Test Form A. An analysis of the errors may be found in Table I on the following page. From the errors made it was found that the large majority of the children knew the beginning sounds and that most mistakes were made on ending blends, vowel combinations and rhyming sounds of words.

1. Publishers, (New York:World Book Co.1937)

Table I

Number of Errors in Auditory Discrimination Test I

Initial Consonants		Initial Blends		Prefixes		Final Consonants		Final Blends		Suffixes		Rhymes	
b		ch		in	1	b		ch	20	es	13	in	12
c		th		ex	22	c	24	th	17	ing	14	ake	17
d		st	6	en	19	d	19	st	17	y	59	ed	45
f		sh	11	up	33	f	16	sh	30	er	21	ay	18
g	12	sp	4	de	18	g	9			ly	42	un	38
h	3	cl	6	be	7	k	8			ty	45	ill	14
j	8	pl	7	re	10	l	10			ed	28	ack	46
k	7	fl	3	un	14	m	15					ee	50
l	5	br	6			n	10					ank	29
m	3	dr	7			p	8					all	26
n	6	tr	8			r	13					ell	28
p	1	fr	8			s	5					en	30
q	20	gr	12			t	17					ing	31
r	4	sm	13			w	26					and	45
s	7	sw	17			x	13					ook	22
t	1	bl	6									ame	38
v	9	wh	49									ot	38
w	14	tw	28									ap	37
y	9	cr	18					Rhymes				op	39
z	11	sl	3					ight	37			eet	61
								old	35			oom	46
								atch	53			ent	32

Exercises by Durrell and Sullivan[1] were used as a basis for the construction of the teaching lessons. Vocabulary studies made by Durrell[2] and by Gates[3] were consulted for the vocabulary used in the exercises. It was considered necessary to use words in the vocabulary meaningful to the pupils in order to make the teaching as interesting and effective as possible. Detailed directions were worked out for each day's lesson in order to facilitate the teaching and make it more efficient.

Description of material.

On page 12 is presented Table II "Day-by-Day Lesson Outline". This gives the letters and word elements taught and the order of presentation. A complete copy of the exercises as presented may be found in Appendix B, page 61.

Lessons were planned using various devices to keep the interest as high as possible. About equal emphasis was placed on the visual and auditory aspects of the experiment. The following sample lessons serve to illustrate the method used.

The first day's lesson consisted chiefly of the auditory phase of word discrimination. The letters f, b, g, c, h, l

1. Durrell and Sullivan, Building Word Power, (New York: World Book Co.,1941)
2. Op.cit., pp. 349-369.
3. Gates, A.I., "A Reading Vocabulary for the Primary Grades, (Revised and Enlarged) (New York:Bureau of Publications,1935)

Table II

Day-by Day lesson outline

Time	Word Elements	Review Elements	Position in Words
1st. Day	f,b,g,c,h,l		as initial sounds
2nd. Day	m,n,d,p,j,k	First day's letters	as initial sounds
3rd. Day	t,s,v,r,w,y		as initial sounds
4th. Day	f,b,g,l,m,n		as final sounds
5th. Day	p,d,c,k,r,s,t,y		as final sounds
6th. Day	th,ch,sh,wh		initial and final blends
7th. Day	br,dr,fr,gr,cr,tr		initial blends
8th. Day	bl,cl,fl,gl,pl,sl		initial blends
9th. Day	all,ill,ell		in rhyming words
10th.Day	ight,ake		in rhyming words.
11th.Day		Review	
12th.Day	ame,ay,en		in rhymes and not rhyming
13th.Day	effect of r on a		in various words
14th.Day	ee,ea		in various words
15th.Day	Flash card drill	Review elements	

Table II (continued)

16th.Day	ai,le,ly		ai in words and le,ly at the end of words
17th.Day	oo	Review	as in words broom and good
18th.Day	con,per,de		prefixes
19th.Day	tion,ier,iest		suffixes
20th.Day	Phrase drill	Review	
21st.Day	au,ought,aw		as in pause, thought,lawn
22nd.Day	ou,ow		as in round,crown,blow
23rd.Day	oa	Game for review	as in boat
24th.Day	Transfer to reading		Paragraph given
25th.Day		Review of 24th day	
26th.Day	Making small words from larger		
27th.Day	or,ir,ur,er		in various words
28th.Day		Review	

were chosen for initial sounds in words. The teacher said, "I am going to say some words that begin alike. Listen and see if you can hear the first letter in each one." The words feather, fellow, fence, ferocious, fever, fire and field were dictated. Then the children were asked to give words beginning the same way while several others wrote on the blackboard the first letter they heard in each word. The teacher then gave a list of words beginning with b and asked the pupils to give other words beginning the same. This letter also was written on the board. The same idea was carried out with the other letters of the day's lesson. When this was done the teacher gave the words gold, cost, heavy, lady, and asked several children to write words beginning like the words dictated.

On the blackboard each one of the day's letters was written five times or more. The teacher then dictated the following words slowly while each pupil had a turn to circle the letter that the word began with.

feet	goat	bump	candle	lamb
lake	hello	bite	fairy	coal
leaf	honk	forest	gift	corn
give	best	hope	found	girl
hand	bad	catch	lemon	card

In the second day's lesson m and n were presented together as they cause a great deal of confusion in reading. A list of words was given beginning with m and n and the children were asked to write the correct letter for each one. A similar procedure was used with d and p only this time words were written on the blackboard for the children to arrange them in two rows. When it came to the letter k, c was reviewed to bring outthe likeness in sound and the fact that we have to see the letters to know which one is used.

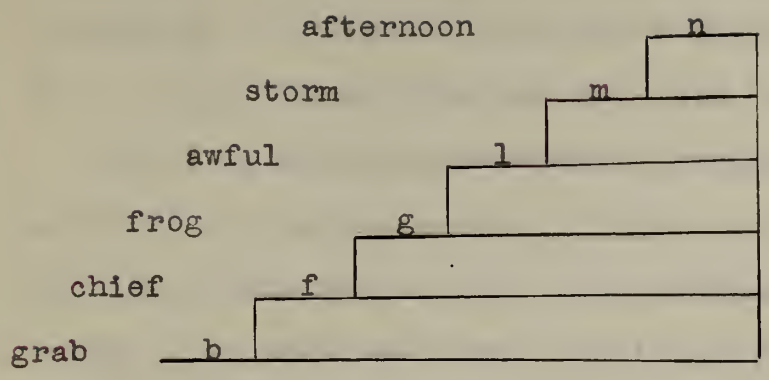
The third lesson contained some sentences the answers of which began with t.

Can you think of a vegetable that begins with t? (Tomato)
What part of the body begins with t? (teeth,toe)
The name of what animal begins with t? (tiger)
A piece of furniture beginning with t? (table)

Towards the end of the lesson a game was played with the day's letters. The pupils were divided into teams each pupil to give a word beginning like the one the teacher gave. If any one failed he had to sit down. The team won who had all standing at the end.

The next lesson began the teaching of final sounds. To keep up the interest another game was played the last five minutes of the period. Stairs were drawn on the blackboard with a letter on each step. The children were to give a word ending with each letter on the stairs. The teacher said, "See how fast you can go upstairs without falling. I'll go

up first".



The ninth day's lesson taught rhyming words ending in all, ill, ell.

The teacher asked for words that rhymed with tell. These words were written on the blackboard. Then words ending like fall were thought of that answered these riddles. The answers were written on the board.

Something we use when we play with a bat. (ball)

Something we walk through to go home from school. (hall)

Something your mother does when she wants you to come. (call)

When something drops we let it .(fall)

Something that is little is .(small)

The same thing was done with words ending in ill. Then the children were given paper to write the following. The teacher said, "Write fill, change fill to fall, now write fell, change to sell, shell, smell. Write till, now still, spill,

spell, spelling. Now write tell, stall, stalled, stalls, stalling". Several children wrote their lists on the blackboard for checking purposes especially suffixes ing, y, ed, s as no formal teaching had been done on this.

The fifteenth and twentieth lessons consisted of flash card drill of word elements. This was for the purpose of quick transfer and to test the word elements that had been taught. The work was done individually but very quickly from cards on which the phrases had been printed in large type.

The twenty-third lesson taught oa as in the words toad, soap, roast, coal. Words were asked for that rhymed with each word and then other words not rhyming were thought of. These were all written on the board and various children circled the oa to show the like element especially in words of more than one syllable. For review consonant blends and prefixes were written in one row while the ends of the words were written all mixed up. The game was to make real words as quickly as possible. No element could be used twice so some real thinking had to be done to make every word correct.

slow	sl	owl
draw	dr	ow
chain	ch	ain
growl	gr	ly
played	pl	tent
street	str	aw

lovely	love	eet
content	con	ayed

The next day's lesson was for the transfer of word elements to a reading situation which is the ultimate purpose of all word analysis teaching. A paragraph was written on the blackboard which the children read silently and then one read it aloud. Various elements were underlined by the teacher and the children were given paper on which they were to write words with the same elements as those underlined. This was not a test but for practice. The paragraph with the word elements underlined follows:

Some girls were having a vacation at a lake. One afternoon seven of them had a party on the beach. Three of them brought pails to put pebbles in. They were having a perfect time when some black clouds started to gather. "Well, it is awful to have a shower decide to drive us away", they all said.

The twenty-sixth exercise was built to help pupils to find small words in larger words. This was for practice in noticing word elements in longer words. Among the words given were forenoon, another, oatmeal, fairy and fright.

Chapter 3

Plan of the Experiment

Selection of Population for Experiment

The selection of pupils for the experiment was somewhat of a problem because all classes in the town were rather small. Therefore it was decided to use third and fourth grades in the three schools of a small town in Rhode Island. The experiment would have been impossible without the cooperation of the Superintendent of Schools.

Before the experimental and control groups could be selected it was necessary to administer intelligence tests for equating the two groups. The Kuhlmann-Anderson Intelligence Tests[1] for third and fourth grades were given to eighty-six children. The writer administered and scored them all. It was decided to use all the children of one school in the experimental group, all the children of another school in the control group and in the third school to divide the children in both grades as nearly as possible according to mental age.

Table III shows that the number of children were forty-four in the experimental group and forty-two in the control group. The mean mental age for the experimental group was 9.8 as compared with 9.56 for the control group.

1. Kuhlmann-Anderson Intelligence Tests, (Philadelphia: Educational Test Bureau Inc., 1927)

The mean chronological age for the experimental group was 8.91 while that of the control group was 8.48.

TABLE III

Group	Number	C.A. Mean	M.A. Mean
Experimental	44	8.91	9.8
Control	42	8.48	9.56

This shows the experimental group as older both chronologically and mentally.

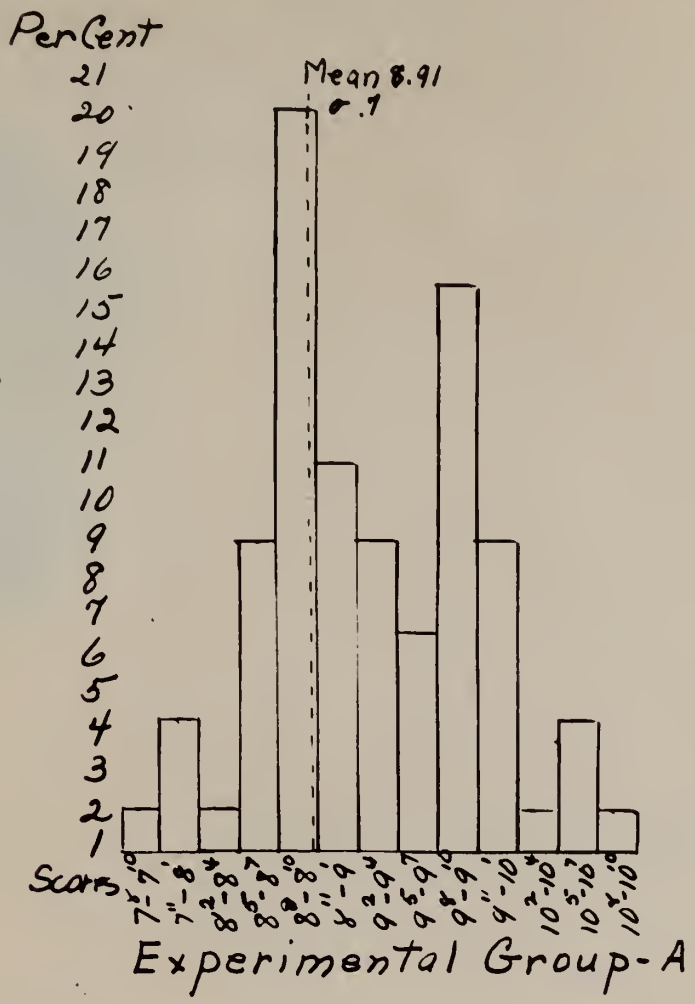
Figure 1 A and B shows the distribution of the chronological ages for each group. The range for the experimental group was from 7 years 8 months to 10 years 10 months as compared with the range of 8 years 1 month to 10 years 6 months for the control group.

Figure 2 A and B shows the distribution of mental ages for each group. The range for the experimental group was from 7 years 8 months to 11 years 4 month and for the control group the range was from 7 years 7 months to 11 years 0 months. The figures may be found on pages 21 and 22.

It was also considered necessary to administer a reading achievement test so that the two groups could be as closely equated as possible not only in mental age but in reading achievement before the teaching began. The Durrell-Sullivan

Figure 1

Distribution of Chronological Ages



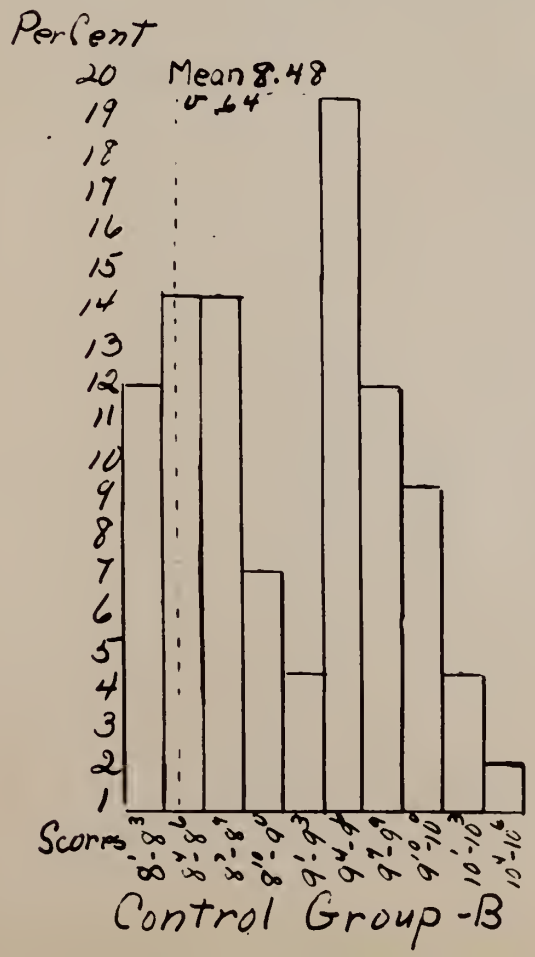
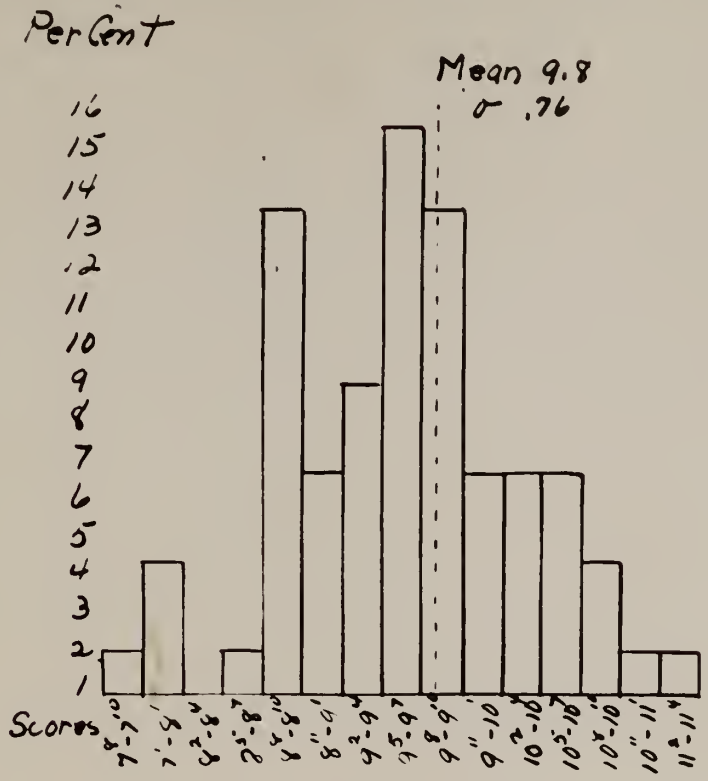
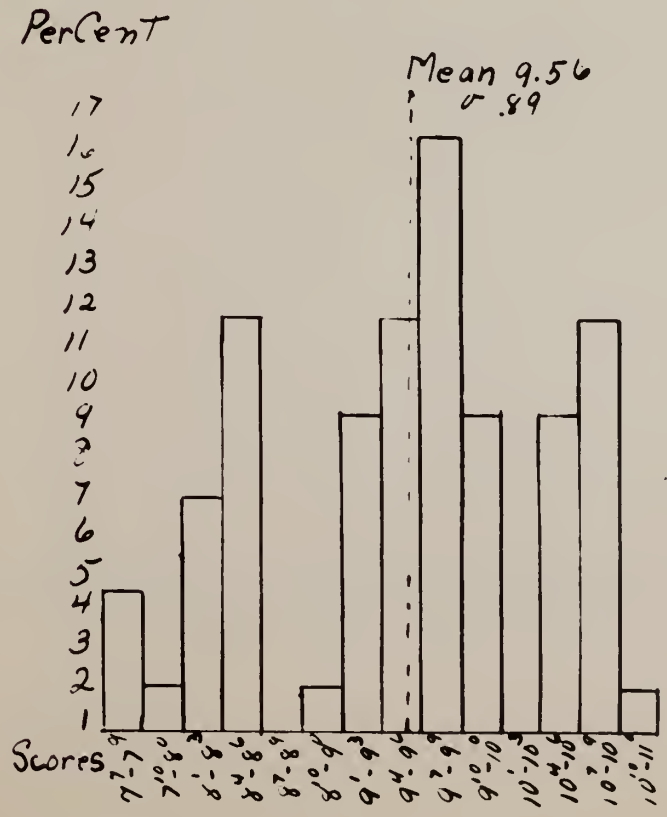


Figure 2

Distribution of Mental Ages



Experimental Group-A



Control Group - B

Reading Achievement Test[1] Intermediate Form A was given and also the optional spelling test which is a part of the same test.

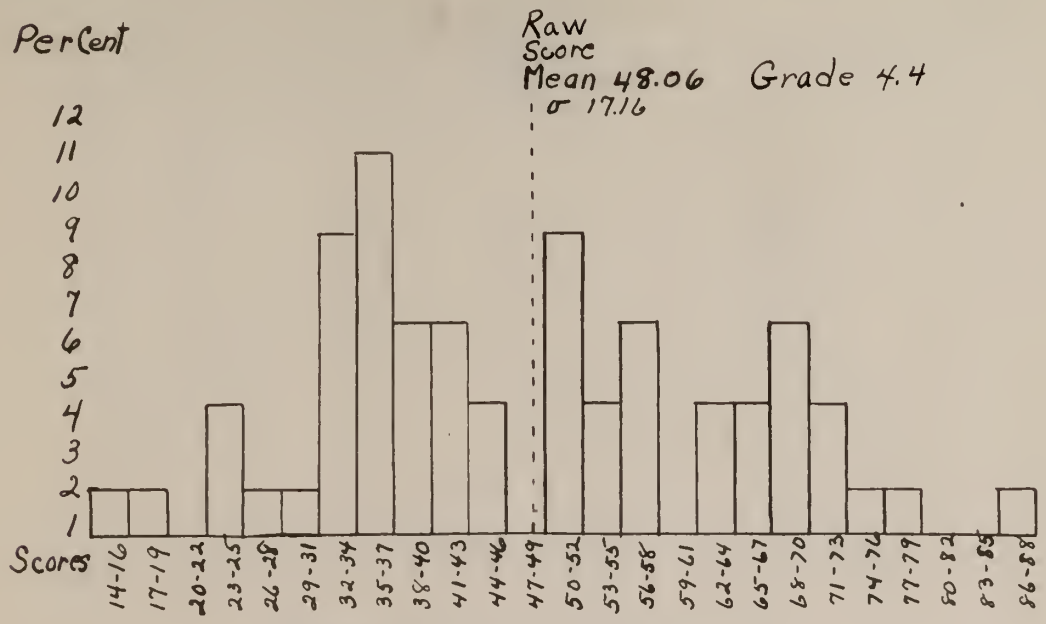
Figure 3 A and B shows the distribution of reading scores in the experimental and control groups.

The distribution of the spelling scores is shown in Figure 4 A and B. Both figures may be found on pages 24 and 25.

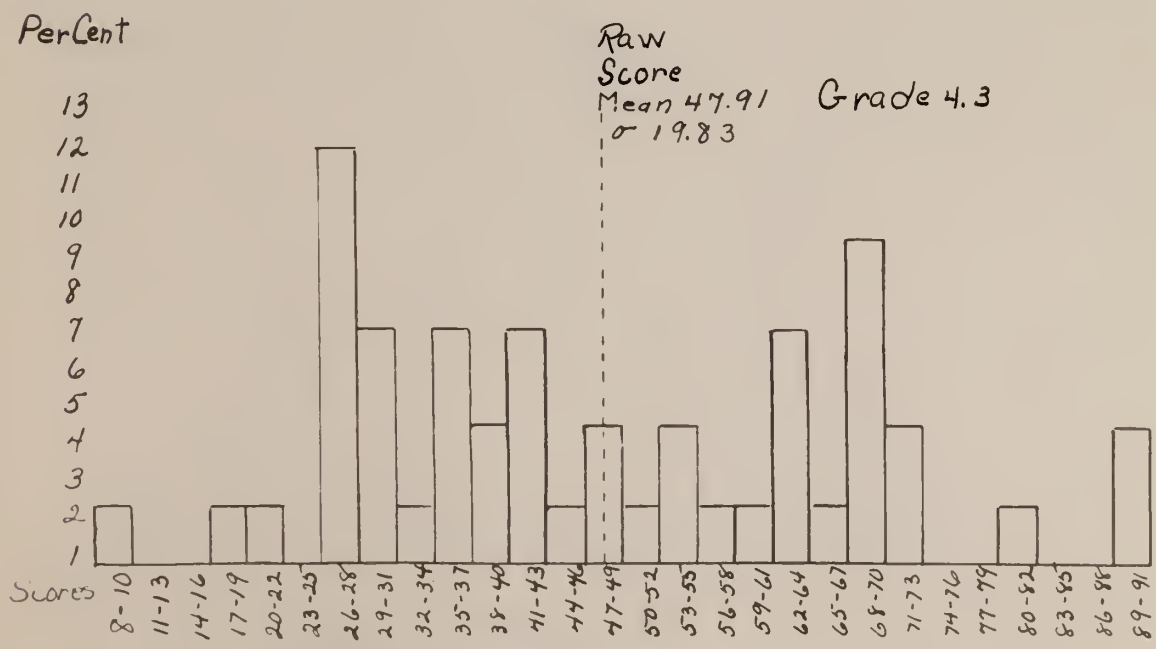
1. Durrell-Sullivan Reading Achievement Test Form A, (New York:World Book Co.,1937)

Figure 3

Distribution of Scores in Durrell-Sullivan Reading Achievement Test - Intermediate - Form A



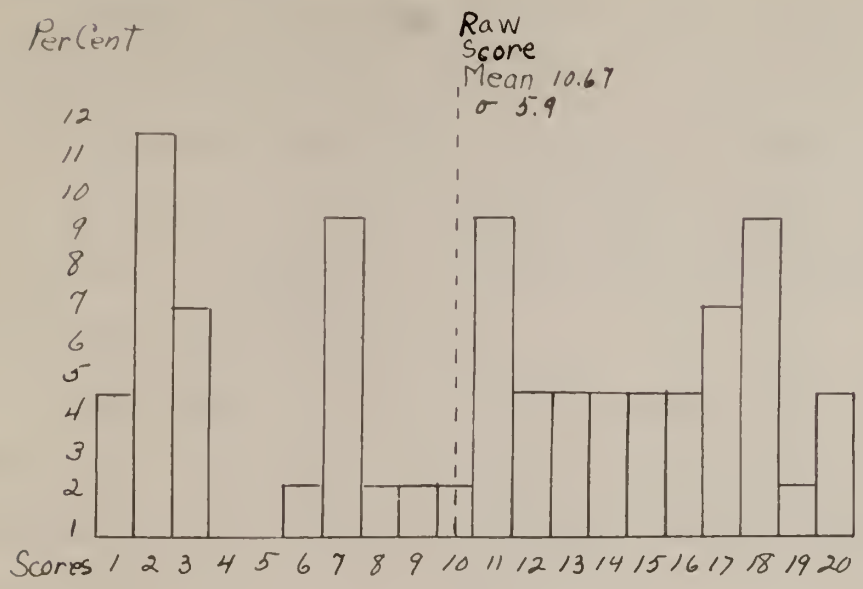
Experimental Group - A



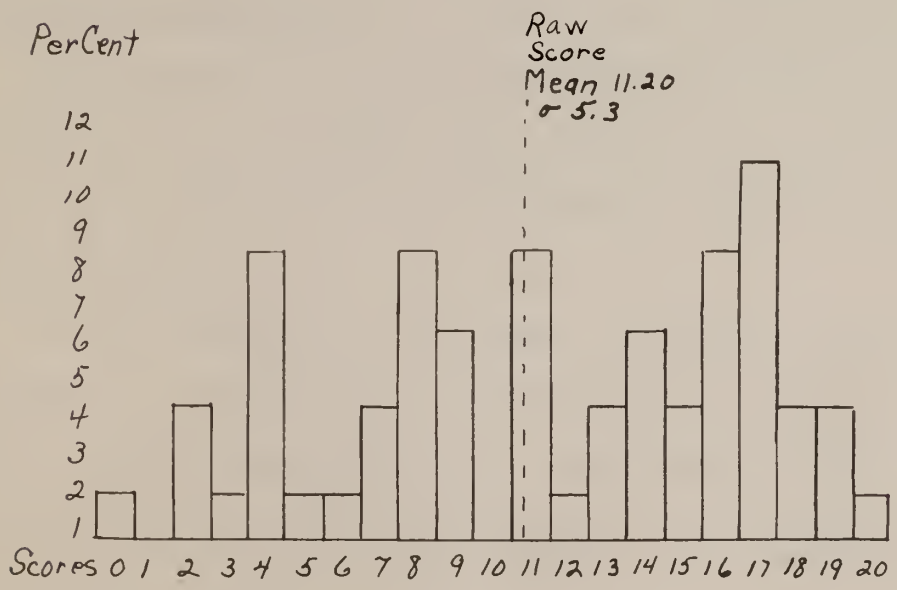
Control Group - B

Figure 4

Distribution of Scores in Durrell - Sullivan Spelling Test - Grades III + IV - Form A



Experimental Group - A



Control Group - B

Construction of Tests.

Before any teaching could be done with the material prepared it was necessary not only to equate the two groups but to get some basis for measuring the effect of the specific exercises. For this purpose tests were constructed by the writer to measure the abilities of the pupils in auditory and visual discrimination.

According to Marion Monroe[1] about 42% of poor readers have great difficulty in sound discrimination. By auditory discrimination is meant the ability to hear similarities and differences in the sound of words. It is being aware that words sound different. The ability to make auditory discriminations between word sounds is important for success. Visual discrimination as used in this study means the ability to see similarities and differences in words and parts of words. A very frequent cause for reading disability is confusions in word recognition because of word discrimination difficulties.

An informal test was built to measure auditory discrimination. The suggestion for the form of test had been presented by Dr. Helen Sullivan. One hundred words were seledted from the primary reading vocabulary lists compiled by Gates[2]

1. National Society for the Study of Education, Thirty-Fourth Year Book, "Diagnosis and Treatment of Reading Disabilities", (Bloomington, Ill., Public School Pub. Co.), p.210
2. Op.Cit.

and Durrell[1]. The first list of words contained twenty items beginning with the consonants of the alphabet; the second list contained twenty of the most common beginning blends of words, (ch, th, st, sh); the third list had eight words with common prefixes; the fourth consisted of fifteen words with ending consonants; the fifth list contained five ending blends; the sixth contained seven words with common suffixes (es, ing,y,er,ly,ty,ed). The pupils were required to write on paper the various word elements asked for in each list as the words were dictated, for example in row one the pupil wrote the first letter of each word; in the next list he wrote the first two letters; in the third list he wrote prefixes. The seventh and last row was different from the others. Here the teacher gave a word for the pupil to write a rhyming word. This list contained twenty-five different word elements as rhymes.

The following is a sample of the various words given.

Initial Consonants	Initial Blends	Prefixes
secret	stocking	expect
happy	whisper	enjoy
quick	frost	decide
kitchen	ground	under
jacket	smoke	remember

1. Op.Cit.

Final Consonants	Rhyming Words
thousand	fed
several	gun
blossom	will
music	bank
report	cold

A copy of the complete test with directions for administering may be found in Appendix A page 45.

To test visual perception twenty-five items were selected. In each of the twenty-five rows were five words similar in appearance, the rows of words graduated in difficulty from three letter words at the beginning to four and five syllable words at the end. From each row a word was flashed for five seconds and then turned down, the pupil to choose and underline that word. The words flashed had been printed in 7/8" type on oak tag. A copy of this test with directions for administering is included in Appendix A page 54.

After the teaching period of the experimental group was finished another auditory discrimination test was constructed and administered to the experimental and control groups as a measure of the effect of the specific training. This test contained one hundred items as did the preliminary test. However, it was divided into two parts-the first followed the pattern of test I very closely, the second half was more difficult. Here the pupils were asked to write certain

words and then change those words by inserting or changing a vowel, adding a suffix or prefix etc. Some examples from the test follow:

Write got, change to goat; write coat, change coat to coast, to coasted, to coaster.

Now write form, reform, deform, performs, performed, performing.

A copy of the complete test may be found in Appendix A page 49.

The plan of the test was patternedafter "Word Analysis Steps" presented in class as a demonstration by Dr. Helen B. Sullivan.

It was also necessary to test visual discrimination after the teaching period for the purpose of measurement of any gains in visual perception made by the experimental group. This test was much more difficult than the preliminary one. It was built to measure the pupil's ability to perceive a certain word element among several other but similar parts of words with a given word.

A copy of this test may be found in Appendix A page 57.

Teaching Procedure.

The writer had obtained the permission of the superintendent of schools to administer the tests to the third and fourth grades of the three schools in the town and to carry on the teaching program for the necessary time in the two schools where the experimental groups were situated. In the school where the whole population of the third and fourth grades were to be used the class was taught in the regular classroom for the specified time of twenty minutes. In the second school where half of each grade was to be given the training the two halves were combined in one room in the building for the teaching procedure. All the teaching was done by the writer.

Chapter 4

Analysis of Data

The data were analyzed to study the effect of specific training in auditory and visual discrimination or word analysis through the teaching of exercises to increase reading ability in the third and fourth grades.

The study concerned the following:

a. The increased power of the pupils' sense of auditory discrimination in the sounds of words.

b. Increased power in the childs' visual perception of words.

Table IV shows the results of the preliminary and final auditory discrimination tests.

Table IV

Analysis of Scores in Auditory Discrimination Tests I and II

Test	Group	No.	Mean	S. D.	S. E. M.	Diff. M.	S.E. Diff.	Critical Ratio
I	Experimental	45	78.16	16.92	2.52	.39	3.52	.11
I	Control	43	77.77	16.17	2.46			
II	Experimental	44	75.34	19.50	2.91	14.83	4.73	3.13
II	Control	43	60.51	24.51	3.73			

In the preliminary auditory test (Test I) which was administered before any teaching was done the mean score of the experimental group was 78.16, while the control group mean score was 77.77. The critical ratio was computed and found to be .11 which is not a statistically significant difference.

In the final auditory test (Test II) which was administered immediately after the teaching period the mean score of the experimental group was 75.34 as compared with 60.51 for the control group. The critical ratio being 3.13, this difference was statistically significant in favor of the experimental group.

As the final test was much more difficult than the preliminary test there is a loss in mean score for both groups in Test II. However, the important thing to consider is the comparison between the scores in each test. The comparison shows that in the first test the difference of the means was

.39 in favor of the experimental group while on the final test the difference of the means was 14.83 in favor of the experimental group, a net gain of 13.44.

Figure 5 A and B shows the distribution of the auditory test scores in the preliminary test. The range of scores for the experimental group was from 26 to 100 and for the control group 39 to 94.

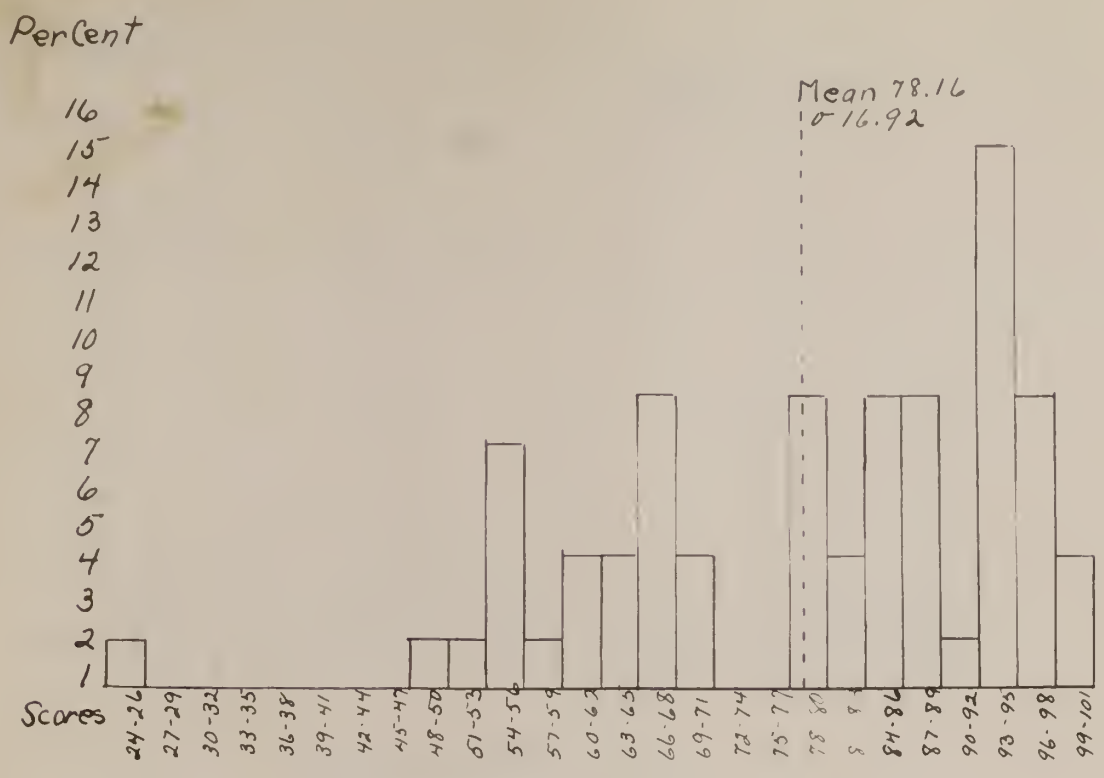
Figure 6 A and B shows the distribution of the final auditory discrimination test scores. The range was from 33 to 100 for the experimental group and from 13 to 93 for the control group.

Figures 5 and 6 many be found on pages 34 and 35.

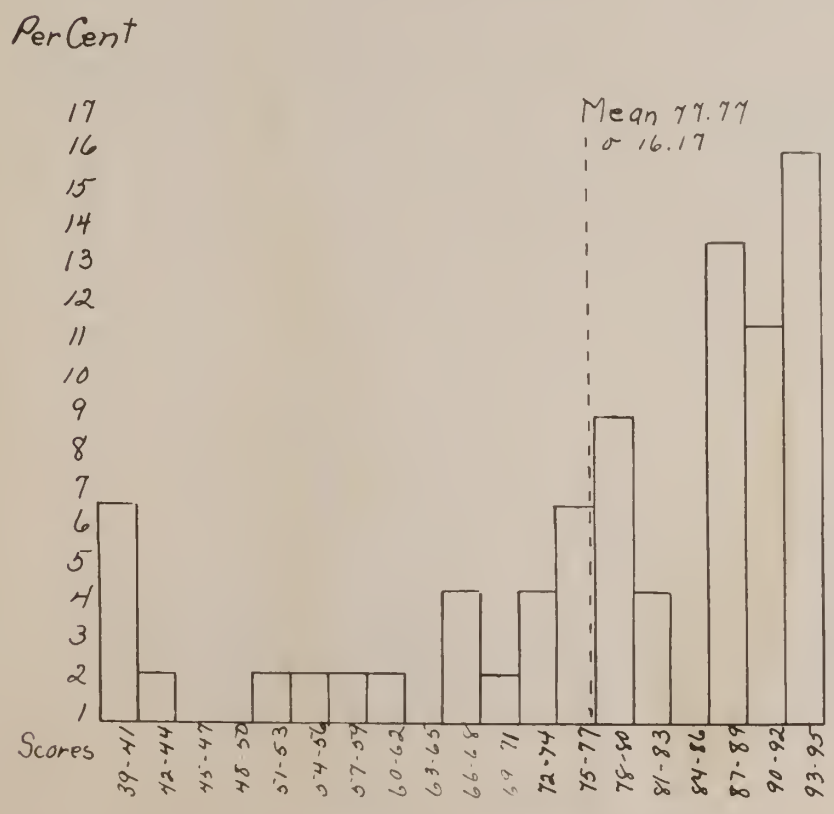
Table V shows the results of the preliminary and final visual discrimination tests.

Figure 5

Distribution of Scores in Auditory Discrimination Test I



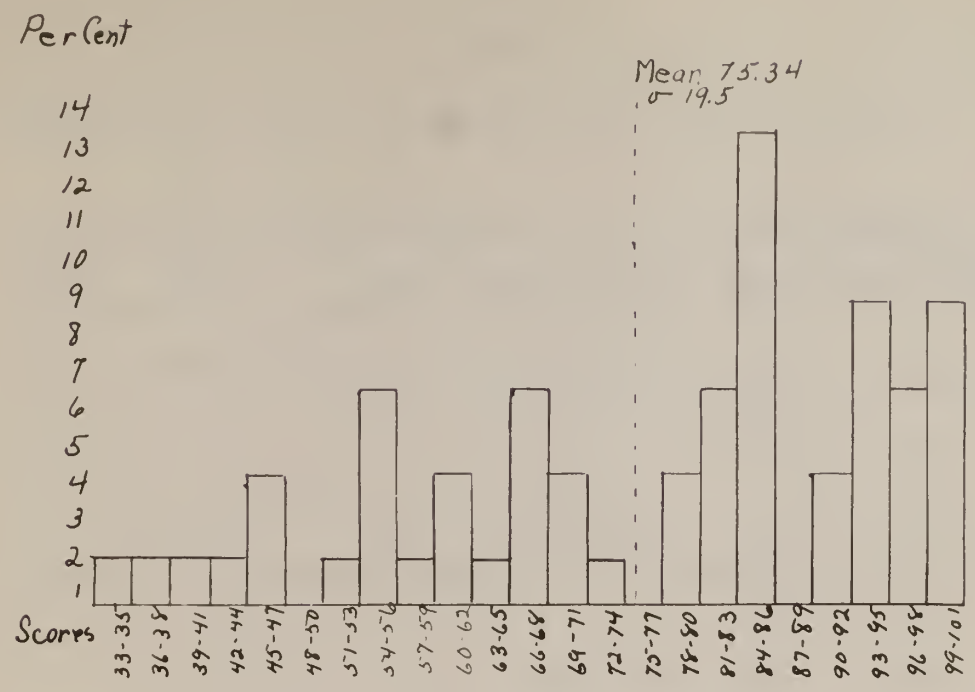
Experimental Group - A



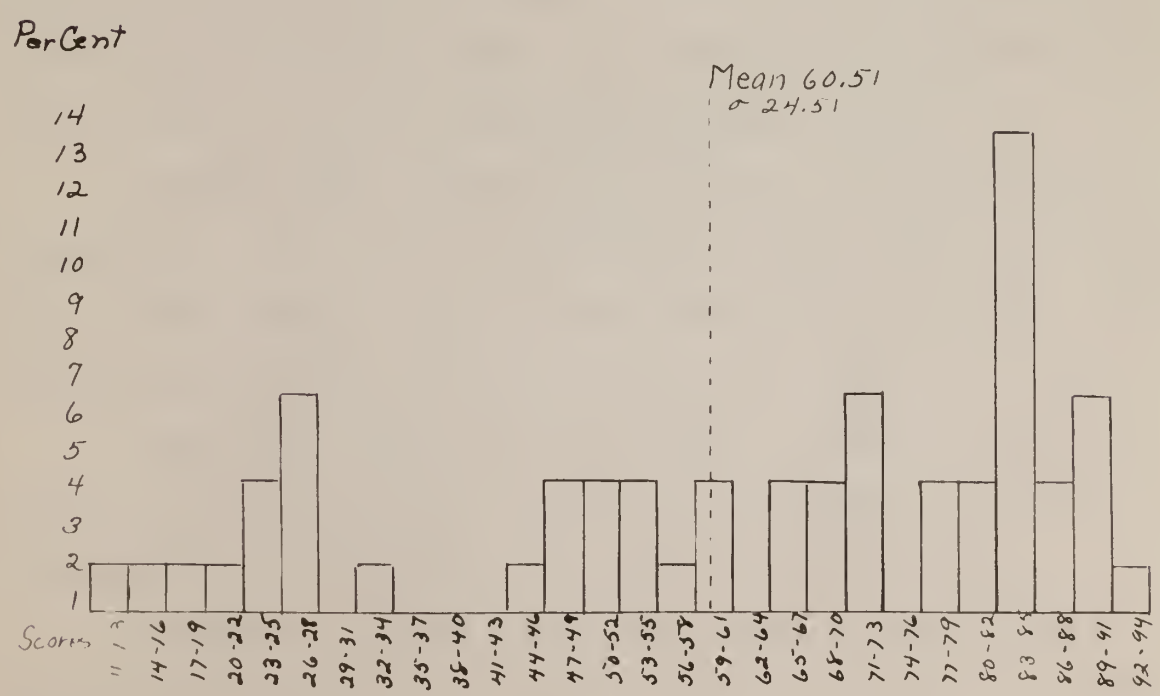
Control Group - B

Figure 6

Distribution of Scores in Auditory Discrimination Test II



Experimental Group - A



Control Group - B

Table V

Analysis of Scores in Visual Discrimination Tests I and II.

Test	Group	No.	Mean	S. D.	S. E. Mean	Diff M.	S. E. Diff.	Critical Ratio
I	Experimental	43	20.91	4.44	.67	.34	.85	.4
I	Control	45	21.25	3.60	.53			
II	Experimental	42	20.38	2.60	.4	3.72	.60	6.2
II	Control	44	16.66	3.10	.46			

The mean score for the experimental group was 20.91 in the visual discrimination Test I which was given before the teaching, while the mean score for the control group was 21.25. These scores show a difference of .34 in favor of the control group with a critical ratio of .4 which was a difference so small that it was of no statistical significance.

In the final visual test (Test II) the experimental group shows a mean score of 20.38 as compared with 16.66 for the control group. The critical ratio was 6.2 in favor of the experimental group-a statistically significant difference.

The final visual test contained the same number of items as the preliminary one but was much more difficult consequently the scores show a loss for both groups.

Figure 7 A and B shows the distribution of the visual test scores in the preliminary visual test. The scores

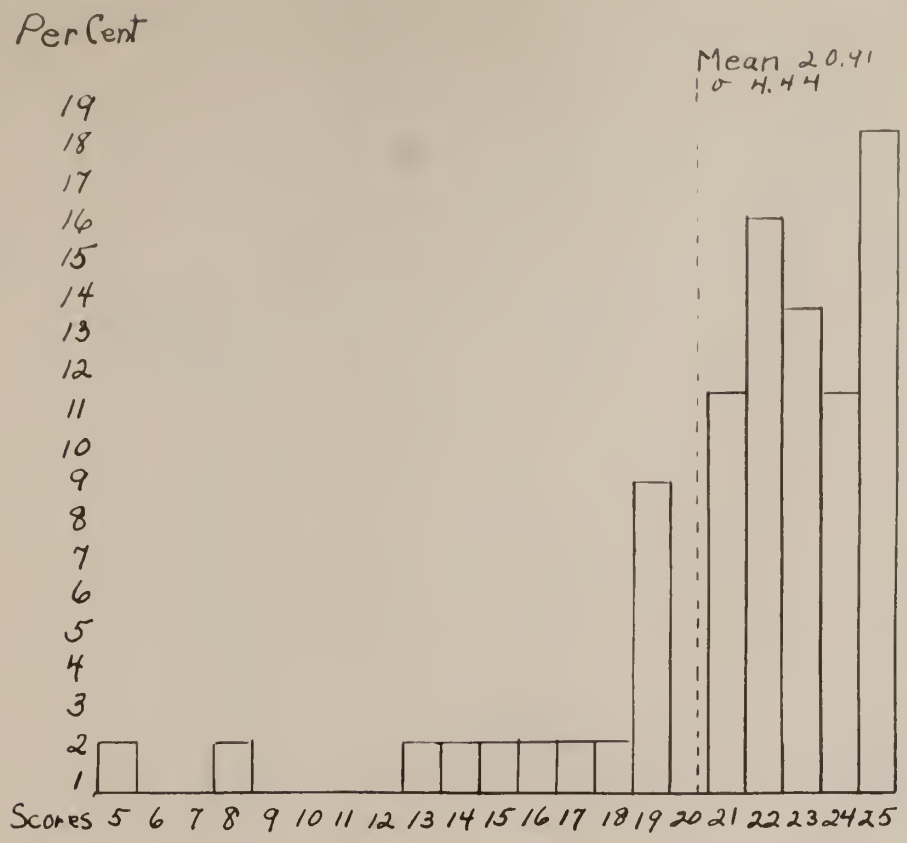
for the experimental group ranged from 5 to 25 and for the control group the scores ranged from 10 to 25.

Figure 8 A and B shows the range of scores in the final visual test to be from 15 to 25 for experimental group and for the control group the scores range from 8 to 23.

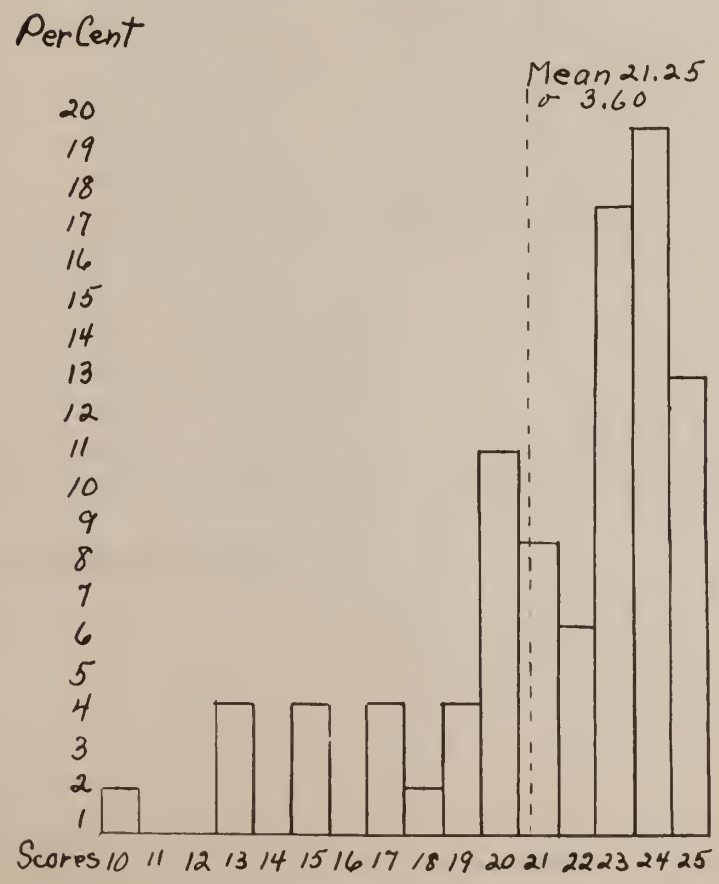
Figures 7 and 8 may be found on pages 38 and 39.

Figure 7

Distribution of Scores in Visual Discrimination Test I



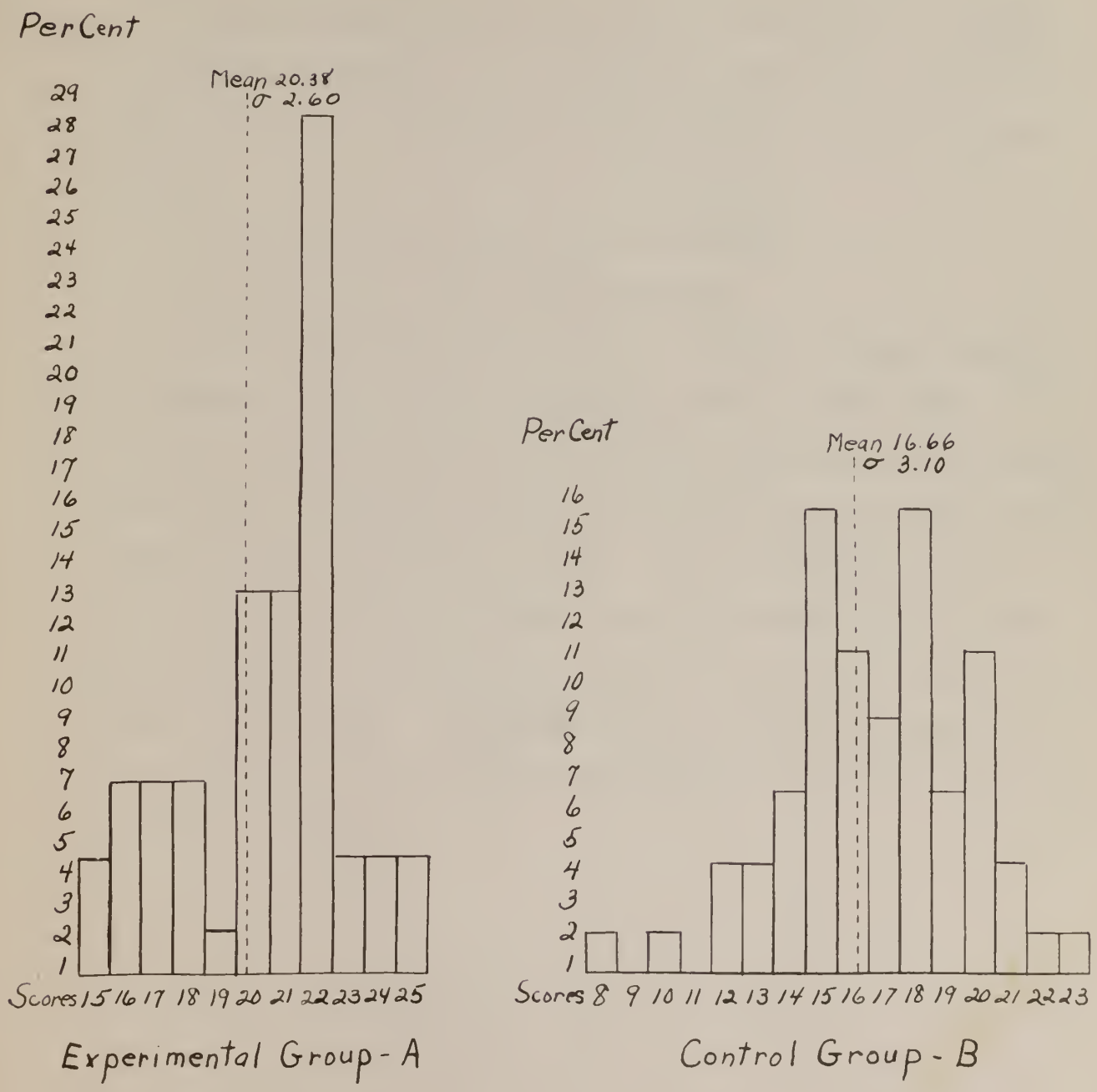
Experimental Group - A



Control Group - B

Figure 8

Distribution of Scores in Visual Discrimination Test II



Chapter 5

Summary and Conclusions

The purpose of this study was to evaluate the effect of specific training in word analysis with third and fourth grade pupils. The evaluation was measured by the following factors:

1. Effect on auditory discrimination.
2. Effect on visual discrimination.

The writer built exercises to develop a keener sense of auditory and visual discrimination and taught these exercises for twenty minutes a day for twenty-eight successive school days to forty-four third and fourth grade pupils in a normal school population. Tests were constructed by the writer to measure auditory and visual discrimination which were given to the experimental and control groups before and after the teaching. The groups were equated chronologically and mentally, also as closely as possible in reading achievement and spelling.

Conclusions

In the auditory discrimination test scores at the beginning of the experiment the experimental group and the control group were very close, the difference of the means being only .39 in favor of the experimental group. At the close of the experiment the mean score for the experimental group was 14.83 points higher than the control group with a critical ratio of 3.13 which is statistically significant. From this gain it is evident that specific training improves auditory discrimination of words in third and fourth grades.

In the visual discrimination test before the experiment both groups were again very close with the difference of the means .34 in favor of the control group. Following the teaching period of twenty-eight successive school days the mean score in visual discrimination for the experimental group was 20.38 while the mean score for the control group was 16.66. When the standard error of the means was computed and the critical ratio was found to be 6.2 in favor of the experimental group a significant difference was shown. This again shows that visual discrimination does improve with training even for a comparatively short period of time as this was.

As the mean mental and chronological ages of the experimental group were a few months in advance of the control

group it probably would be safe to say that some of the gain might be due to that cause. However as the groups were matched very closely in word perception at the start of the experiment it may be concluded that specific teaching in auditory and visual discrimination does increase third and fourth grade pupils' facility in the use of word analysis.

There were several limitations of the study. In the first place it was impossible to equate the experimental and control groups any closer in chronological and mental ages. Secondly, if the experiment could have been carried on in the fall there would have been an opportunity towards the close of the year to test any increased ability in reading achievement and spelling in the experimental group because of the special auditory and visual training. A third limitation was that learning rate of new words was not tested for comparison of the two groups.

Suggestions for Further Research.

1. What would be the result if the same type of experiment were done using a much larger school population?

2. What result would specific exercises in auditory and visual discrimination for a longer period of time have upon reading achievement and spelling?

3. What would be the result if the regular classroom teacher taught similar exercises using the particular words in

the daily reading lessons and incorporating the work into regular reading and spelling instruction?

4. How would training in word analysis increase rate of learning in word recognition in third and fourth grades?

5. What would be the result of constructing a scale showing the order of difficulty in the items on the preliminary auditory discrimination test?

Appendix A

Auditory Discrimination Test I with Directions for Administration

(Each pupil is supplied with a pencil and lined language paper).

What is the first letter you hear in the word Basket? (Get the answer). Yes, b. Write b on your paper. (Write b on the blackboard).

What is the first letter of dinner? That's right d. Write d on your paper under the b. (Write d on the board under the b so the children get the idea).

Now write the first letter of each of these words. (Dictate slowly).

Initial letters

family	secret	gate
happy	voice	kitchen
learn	yard	middle
neighbor	car	pound
quick	jacket	robin
tongue	wonderful	zebra

Initial blends

What are the first two letters you hear in the word chicken?

All right ch. Start a new row and write ch on your paper. (Write ch on the board). What are the first two letters in thought? Yes, th. Write the th under ch. (Teacher does the same at the board).

Now write the first two letters you hear in these words. (Dictate slowly).

stocking	spoil	sweet
shout	driver	slide
cloud	trip	blanket
pleasant	frost	whisper
flower	ground	twenty
brother	smoke	cracker

What are the first letters you hear in inside? Yes, in. Write in on your paper. Underneath write the first two letters of these words. (Dictate).

Prefixes

expect	before
enjoy	remember
upon	under
decide	

What is the last letter you hear in the word club? Write b on your paper. Now underneath b write the last letter you hear in these words.

Final letter

thousand	queer	dwarf
bug	report	black
several	six	chirp
garden	music	blossom
	yes	crew

Final blends

Raise your hand if you can tell the last two letters of church. All right, in a new row write ch. Now write the last two letters of these words.

tooth

first

push

hatch

Suffixes

What are the last two letters of boxes? Write es. Now write the last three letters of boxing. The last letter of foxy. The last two letters of

rubber

nearly

plenty

printed

Rhymes

What word can you think of that rhymes with win? Write it on your paper in a new row. (Teacher writes a rhyming word on the board).

Do the same with cake. (Ask for several rhyming words and then write one on the board). Write one of the words that rhymes with cake on your paper. Now write a word that rhymes with each of these words. (Dictate slowly).

fed	sing	feet	went
day	look	hall	stop
gun	came	bee	night
will	hot	hand	cold
bank	bell	cap	match
ten	pack	room	

In scoring count the number of correct responses. The samples are counted as part of the score. There are 100 items in all.

Auditory Discrimination Test II with Directions for Administration

First Half - 50 Items

What are the first two letters you hear in chuckle? That's right ch. Write ch on your paper. (Teacher writes ch on the blackboard). Now write the first two letters of these words. (Dictate slowly).

Beginning Blends.

thorny	brilliant
stale	wheat
shadow	special
clutch	gravel
flutter	

Now write the first three letters of these words.

scramble

thread

stripes

spread

Now write the first syllable of these words.

Prefixes

engineer	remain
elevator	unfold
upset	anywhere (3letters)

What are the last two letters of the word branches? That's right write es on your paper. (Teacher writes it on the blackboard).

Write the last two letters in these words.

Suffixes

thirsty

bottle

suddenly

faster

You know how to write happy. On your papers write happier.

Write the last syllable in station.

You should know how to spell sleepy-now write sleepiest.

Who can tell a word that rhymes with tail? (Write one of the words volunteered on the board). You may write one of the words that rhymes with tail.

Now write a word that rhymes with each of these words. (Dictate slowly).

bake	deep	soon	ring
fall	night	pound	twin
today	cook	low	straw
neat	jar	down	name
road	hill	sell	when

Second Half - 50 Items.

Turn your papers over.

How do you write men? That's right, m-e-n.(Write it on blackboard). You may write men on your paper. Now how is mean written? (Have a volunteer write mean under men on the board). What letter changed men to mean? Yes, the a. Now let's do the same kind of thing with these words I am going to give you. (Dictate the following slowly).

Write each, next write reach.
Write pat, change to part and party.
Now write fed, feed.
Now shot, change to shoot, shout.
The next two words rhyme-bake,lake.

Write ball, under it write bell, now write bill, hill, hilly.
Write got, goat, coat-change to coast, coasted, coaster.
Now write seat, seated, side, beside, inside.
Write am, now, aim.
Write lay, delay, now flow, flower.
Write need and needle.
The next word is tight, make it say tighten, tighter, tightly, tightest.
Write form, reform, deform, conform, performs, performing, performed.

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The score is the number of correct responses counting in the samples. There are one hundred items in all.

Visual Discrimination Tests

Directions for Administration of Visual Discrimination Test I

(Each child should be provided with a pencil before the test papers are passed out. The teacher has twenty five 3"x10" flash cards with the key words printed on them. Pass the mimeographed test to each pupil and proceed with the following).

Boys and girls, there are twenty five rows of words on this paper. In each row are five words. Notice that the rows go across the paper. I am going to show you one of the words in each row. You are to look carefully at the word and when I put it down underline the word you saw on the card. Look very carefully at each word. Now let's try the first one together. (Hold up <u>was</u> for five seconds). Now underline the word in the first row that you saw on the card. Which word was it? Yes, was, the second word. Now do the others the same way.

(In each case call the number of the row and flash the card for five seconds and put down. The words to be flashed and a copy of the test are on the following pages. The score is the number of correct words underlined counting the sample as one).

Key Words for Visual Discrimination Test I

1. was
2. came
3. these
4. thought
5. plenty
6. back
7. showed
8. humble
9. chuckle
10. furious
11. whistle
12. ventilate
13. rivulet
14. population
15. obedient
16. necessary
17. laborious
18. disagreeable
19. guiding
20. affectionate
21. comprehend
22. expensive
23. blister
24. stimulate
25. unfortunate

NAME GRADE SCHOOL

1.	saw	was	as	sad	war
2.	come	case	came	care	corn
3.	these	where	those	there	whose
4.	bought	thought	through	bough	brought
5.	picture	party	pretty	paint	plenty
6.	bark	bank	back	black	band
7.	should	shadow	shoulder	showed	shade
8.	horrible	humble	horizontal	hospitable	honorable
9.	chemical	chuckle	cherish	chalice	chapel
10.	ferocious	furnace	friction	furious	fierce
11.	wheedle	whittle	writhe	throttle	whistle
12.	vegetarian	ventilate	vexation	venerable	vertical
13.	rallied	realized	rivulet	radiant	railroad
14.	population	procession	perspiration	pedestrian	prescription
15.	objective	obstinate	optimistic	obedient	opponent
16.	majesty	nursery	monastery	necessary	mystery
17.	tremendous	ludicrous	laborious	tremulous	luxurious
18.	disagreeable	disappearance	discouraged	disappointment	distinguish
19.	gurgling	glittering	gleaning	guiding	grappling
20.	apprentice	allegiance	affectionate	astonishment	aeronautic
21.	complicate	competent	compensate	complicate	comprehend
22.	expensive	explosive	exposure	extensive	expansive
23.	bladder	bluster	bewilder	blister	banister
24.	stockade	stimulate	standard	statute	student
25.	unaccustomed	unfortunate	uncomfortable	unpalatable	unqualified

Directions for Administration of Visual Discrimination

Test II

Boys and girls, look at these words on the blackboard. At the top is a word and then there are four words beneath it. One of these four words has the same two letters in it that the top one has.

(These words should be written on the blackboard).

blocks	already	bounce
brains	single	powder
blister	ladies	downstairs
dilute	below	lounge
floats	final	foliage

Who can see the same letters in one of these words that is in the top one? That's right, the bl. We'll put a circle around the bl. (Have a pupil do it).

Now let's look at the next words. Who can find some letters in one of these words like those in the top word? Yes, al Where are the letters this time? That's right at the end instead of at the beginning. Let's box the al. (Ask a child to box it).

Now you are to do the same with the words on your paper. Look carefully at each list and find the word with the same letters

in it that the top one has. Remember the letters may be at the beginning, in the middle or at the end of the word. You must find at least two letters together that are the same. In some cases you must find three letters to make it right. Work as quickly as you can but do it carefully. All right go ahead. (Allow a reasonable time. This is not a timed test).

Score is the number circled correctly. There are twenty-five items.

Visual Discrimination Test II

NAME SCHOOL GRADE

starting	whether	bridge	trench	plate
stiffen	clutch	dreary	crusty	blossom
cracker	really	prairie	traffic	drink
split	wreath	bravery	terrible	practice
throttle	whisper	bumper	refuse	plenty
flies	special	grocer	clutch	thick
freeze	awful	glance	office	chimney
those	scramble	grieve	settler	strength
plump	chapel	pedlar	cellar	shelves
flannel	spatter	harbor	clothes	trailer
cheerful	floor	shadow	thrill	light
shower	fellow	charge	mellow	taught
blacksmith	blanket	accomplish	miller	afraid
scratch	pleasant	thread	collar	frightened
whistle	snowflake	whisper	smaller	replied
deep	dream	upstairs	balloon	daughter
slippery	glimmer	ready	stormy	gnawed
speaking	gleam	prayers	rooster	fountain
depend	dainty	because	boasted	saucy
sleeping	believe	afraid	bemoan	floated
crawl	nation	perhaps	board	flame
claws	simpleton	promise	before	perfume
sauce	relation	beneath	hoarse	share
fellow	uncertain	permit	doorstop	airplane
spoiled	engine	princess	courage	shameful

Appendix B

TEACHING MATERIALS

These exercises were planned with the purpose in mind of training third and fourth grade pupils in more careful auditory and visual discrimination of word forms and word elements. The children were not expected to learn all the words presented, but rather to increase their ability to see likenesses and differences of word elements in many words and to increase auditory keenness of the same or different sound in words.

FIRST DAY

Teach f,b,g,c,h,l as initial sounds.

I am going to say some words that begin alike. Listen and see if you can hear the first letter in each one. (Dictate slowly)

feather fellow fence ferocious fever fire field

(Have a number of children give other words beginning with f and several write f on the blackboard)

Now I'll say some words that begin with another letter. See if you can tell what it is. (Dictate)

bang bowl bottle bomb bicycle beautiful barn

(Have a child write b on the blackboard while others give words beginning the same). Now listen again. (Dictate)

gale gasoline goblin guest gate garden game

(Ask several children to write the letter on the blackboard. Other children may give words beginning with g. Dictate)

company cotton camp carrot cottage candy card

(Several children write c on the blackboard. (Dictate)

heat heel honey happy hold hungry health

(Children give words beginning the same and write h on the

blackboard). Now listen again. (Dictate)

loud lamp ladder lazy lonely lettuce lesson

(Dictate) bench (Ask a child to write a word beginning the same).
(Have children write words beginning like the following words. Dictate)

gold cost heavy lady

(On the blackboard have each letter written five or more times. As the following words are dictated ask individuals to circle the letter that each word begins with. (Dictate slowly).

feet goat bump candle lamb lake hello
bite fairy coal leaf honk forest gift
corn give best hope found girl hand
bad catch lemon

(Notice any children who are confused and watch in future teaching).

SECOND DAY

Teach m n d p j k as initial sounds.

Today we are going to talk about some other letters that words begin with.

Listen to these words and raise your hand if you can tell the name of the letter the words begin with. (Dictate)

mean morning more might metal merry marine

(Ask two or three children to write words on the board beginning the same).

Now listen carefully to these words.

nurse notion nonsense neighbor nervous native

(Ask children to tell the name. Choose three or four children (those who seem confused, if any) to go to board and write m or n as the following words are dictated).

Listen carefully and write the correct letter as the word is given.

milk meat nothing most near north nose mile note music mark needle

(Dictate and write on board).

pay paper dry pass desk place dirt done dinner part dear people deep pull

(Ask children to arrange them in two rows according to the letter each word begins with. Each child should havepaper to do this on while one does it at the blackboard).

Boys and girls listen to these words. (Dictate)

jam joke joy jacket journey jello

(Have children give words beginning the same and have the letter written on the board. Write some of the words on the board as they are given. Dictate these words).

kettle key kitchen king kiss kite kindle

(Ask that the letter be written on the board. Review c from yesterday and show the likeness. Write words on board as children give words beginning with both letters).

THIRD DAY

Teach t s v r w y as initial sounds.

Today let us listen to some other words that begin alike. (Dictate)

table talk today teeth telephone tomato

What is the first letter?

Can you think of a vegetable that begins with t? (tomato)
A part of the body? (toe,teeth)
An animal beginning with t? (tiger)
A piece of furniture beginning with t? (table)

(Have several children write words on the board beginning with t).

Listen to these words that begin with s which tell us <u>when</u>. (Dictate)

second summer sometime spring since season

(Children give words beginning with s. Write some on board).

I'll say some words that begin like yellow. (Write yellow on the board. Ask children to give words beginning with y. Write on board as given). These are some words that begin with y. (Dictate)

yesterday year yard yowl yacht

Now listen to these words. Say them after me. See if you know the first letter.

violin vacation volcano vacant valise vegetable

(Ask several children to write v on the board. Take time here to review f because of similarity of sound. Ask Children to give words beginning with f and v and write them on the board. Other children may circle all the f words and underline the words beginning with v).

Now these words have a different letter at the beginning. (Dictate)

we weather welcome wait weary Walter

What letter is it? Give some words that begin the same.

What do these words begin with? Raise your hand if you know. (Dictate)

rough relish rainbow recess remember

(Have children write r on the board. Write the letters r w y v s t on the board. Divide the pupils into teams according to size of class. Number the teams).

We will play a game with these letters. I'll say a word that begins with one of these letters. Number 1 team may be first.

You are to give a word that begins like the one I gave and point to the correct letter on the blackboard. If any one fails he has to sit down. (Keep a list of those who fail for future help). See how many teams can keep every one up. Let's go fast. Already.

witty	yelp	your	turpentine	ranch
telephone	salmon	tax	wages	remain
yolk	violin	yellow	sense	week
ripple	wound	weapon	vacation	salad
sausage	rude	raise	roast	veranda
very	sack	veil	yuletide	tunnel
seal	violet	reason	terrible	together

FOURTH DAY

Final sounds f b g l m n.

This week we have been talking about letters at the beginning of words. Tell me the first letter in these words fence bottle gate camp honey lonely merry neighbor deep paper.

Today we are going to listen for the last letter in some words. (Write half on the blackboard. Ask a child to find the last letter). Now I am going to say some words ending with this letter. Say the words after me. (Dictate) brief leaf thief roof elf itself What was the last letter?

Now I'll say some words ending with b. Say them after me. Besure I can hear the b. (Dictate)

job tab rub taxicab club scrub

Who can give a word ending in b?

Now we'll say some words ending in g. Listen. (Dictate)

tag jog log wag beg dig Who can think of words ending with g?

Say these words after me.

bell mail real awful cool pencil spoil

What letter is at the end? Give some words ending the same.

Listen and say these words after me.

them storm stream blossom wisdom emblem

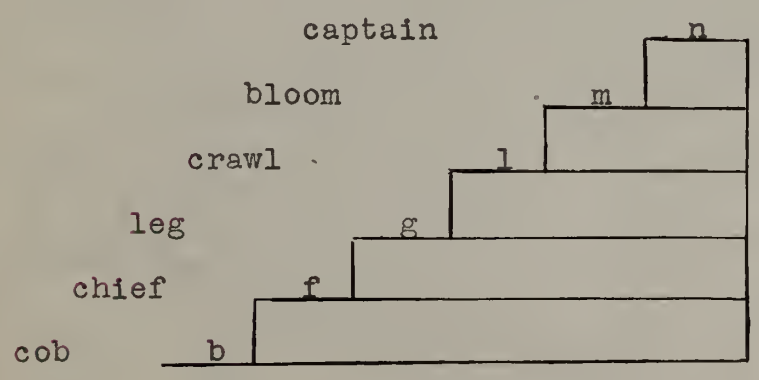
What is the last letter?

Now listen carefully to these words, say them after me.

(Dictate)

spoon queen pen Indian ribbon clown chin

Now let's play a game with these letters.
(Make stairs on the board with a letter on each step).
You must say a word that ends with each letter so you may go up the stairs without falling. See how fast you can climb, I'll go up first. (Call on as many children as time permits).



FIFTH DAY

Final sounds p d c&k r s t y.

We are going to listen again today to the endings of some words.

Listen and say these words after me. (Dictate)

hoop chirp airship leap rap sharp snap tramp whip shop skip buttercup clap

Say these words. Say the d so I can hear it. (Dictate)
bound custard defend frigid fraud barnyard bead beyond leopard husband homestead

Now again.
(Write the words on the board in two columns as they are dictated c in one, k in the other).
attic music magic maniac electric artic elastic truck neck brisk pink stick beak drank mark shook
(Bring out the fact that the sounds are the same).

Say these words after me. (Dictate)
sailor danger baker neighbor pair queer choir glider
Who can think of a word that ends with r?

Now who can give some words that end like us class business news glass seeds its ours?

Listen to these.

tonight peanut wheat jacket frost forest ant dirt

These words end in y. Say them after me.
donkey daisy cherry lily penny tiny twenty somebody
balcony bravery courtesy dainty glossy gloomy gypsy

(Compare sound of y at end and beginning of words. Use
yes yard yarn yellow yacht your

Write the letters p d k r s t y on the blackboard.
Divide pupils into teams of five or six).

Lets play a game with these letters. I will say a word that begins with one of these letters and you are to give a word that ends with the same letter. Lets try one like this. If I say kitchen you might say lock because lock ends as kitchen begins. Point to the letter on the board as you give the word.
(Keep score for the teams).
(Use the following words mixed up).

people	dirt	key	recess	sauce
pull	dear	king	ranch	sandal
paper	deep	kite	racket	salad
place	donkey	kindle	railroad	service
pay	dwarf	kept	rainbow	seal
part	daisy	kidnap	relation	sack

tent	yell
tart	yacht
terrible	yowl
temper	yolk
tease	yet
tax	young

SIXTH DAY

Teach initial blends-th wh ch sh and final blends th ch sh.

Last week we talked about different letters at the beginning of words and at the end. Sometimes two letters together have the sound of one. Listen to these words. (Dictate and write on the blackboard).

third thatch thicket those thousand though

These words begin with what two letters? (Have children circle the th in each word. Ask children to give words beginning with th).

Now listen to these words and say them after me. (Write on blackboard).

whether while wheedle where whizz wharf

I will ask some questions and see if you can answer with words beginning with wh.

What do you do when you talk very softly? (whisper)
What do you do if you call your dog by puckering up your lips? (whistle)
Where does a big boat dock? (at a wharf)
What noise does a horse make? (whinny)
What do boys like to do with a jack knife and piece of wood? (whittle)

We have talked about words beginning with th and wh. Now these begin still different. Say them after me. (Write on blackboard).

charcoal chuckle charm check chalk chance
Now listen and see how these words are different. (dictate)

couch clutch hatch pitch ranch scratch

(Bring out difference and ask children to repeat words as they are written on the blackboard. Have the ch circled at beginning and end of the words.)

Now I am going to change the two letters again. Tell me the letters you hear at the beginning of these words.

shelves shower shanty shark shadow shave

Say these after me

Trash radish mesh crash fresh finish polish

(Compare beginning and end of sh words. Dictate)

south bath teeth cloth blacksmith earth with

(Pass out slips of paper and ask children to write the first two letters they hear in these words. Dictate)

what she when children thank thing white short show throw thought child shine choose shoot
(Check with children. Have individuals write their lists on

the blackboard.

Now write the last two letters you hear in these words.

stitch publish depth birth notch length dash reach

crunch astonish relish such strength

(Check the same as above).

SEVENTH DAY

Teach beginning blends br dr fr gr cr tr.

What letter does door begin with? tap? bark? gate? farmer? Now listen to some words beginning with two letters you have had before.(Dictate)

broom brave bridge broke brass breath brick bright

(Have children tell what the letters are and ask three or four to write br on the blackboard). Say these words after me. (Dictate)

dreary dragon drag driver dream dress dress draw drink

What are the first two letters? (Ask several children to write dr on the board). Listen again to words beginning with two letters you know. (Dictate)

front fruit free frog frost fresh freeze fright

(Ask children to write fr on the blackboard. Children give words beginning with fr). Say these words after me. Be careful to sound the first <u>two</u> letters very plainly.

grove grief gravel grease greedy grocer grade ground

Who can think of another word like these at the beginning? (Get several quickly). Now repeat these words after me. Be careful for they are something like the gr words. (Dictate)

crate crew crown cry cracker crow crisis crib

Repeat some gr words and have the letters written on the blackboard then repeat cr words and have the letters written for comparison. (Dictate these words and ask children to repeat).

traffic treat trace trumpet truce trouble trip trout

(Ask children to give words beginning the same and have tr put on the board.)

Let's play a game now. We'll divide into two teams and when I give a word you are to give the sound and point to the letters the word begins with. If you do it correctly it will count one point for your team. (Have the blends on the board and dictate as many as there is time for).

trash	broken	crust	draft	greeting
frisky	creep	triangle	brim	grind
broken	trench	drawing	crazy	freckle
drift	fruit	brilliant	groan	dream
crisp	grizzly	frown	tramp	braid
grapevine	brush	drip	freight	trail
fried	crab	tremble	grand	druggist
frame	dread	grain	cradle	brain

EIGHTH DAY

Teach beginning blends bl cl fl gl pl sl.

Today we are going to have some more letters that you know only two letters together to make one sound.

What letter does bacon begin with? calm? feather? gale? peck? salmon? lemon?

Now say these words after me. Listen to the first two letters and see if you can tell what they are. (Dictate and write on blackboard).

blocks bled blacksmith blossom blame blind

(Ask a child to box the bl in each word. Ask other children to write words beginning with bl). What are the first two letters you hear in these words? (Dictate)

club cluck clap clock close clean

(Ask several children to write words beginning with cl and tell the first two letters). Say these words after me and listen carefully for the beginning. (Dictate and write on the blackboard).

flash flat floor flower flew fly

What are the first two letters? (Children write fl).
(Each child should have apiece of paper). Write on your paper a word that begins like glass glow gloves.

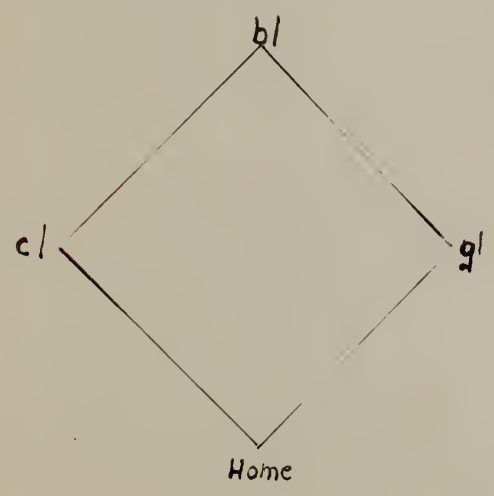
(Call on different children to tell their words and write them on blackboard as they are given. Have the gl circled).
Now write on your paper a word that begins like plant plum plenty. What word did you write? (Call on several children to write the words on the board). What are the first two letters? (Ask other children to circle the words). Listen to these words and say them after me.

sled slice slip slow sly slide

Who can give some words beginning the same?

Game.

How many like to play ball? Today we'll make believe we are playing ball.



This is our ball field. I wonder how many can make a home run. We do it like this. Gl is first base, bl is second and cl is third base. In order to make a home run you must give a word beginning with each sound. Like this glow, black, close, home. You must go fast for a home run. The other team will use these letters fl, pl, sl.

(Change the letters on each base or make another diagram).

I will keep score for each home run and see which team wins.

NINTH DAY

Teach rhyming words ending in all, ill, ell.

Today we are going to talk about words that end alike or rhyme. Who can think of a word that rhymes with tell? (Get a list of words that rhyme and write them on the blackboard).

Now let's think of some words that rhyme with fall that answer these sentences. (Write words on board as given).

Something we use when we play with a bat. (ball)
Something we walk through when we go home from school. (hall)
Something your mother does when she wants you to come. (call)
When something drops we let it _____ (fall)
The farmer keeps his horse in a barn in a _____ (stall)
Humpty Dumpty sat on a _____ (wall)

Let's try to think of words rhyming with bill.

What we slide down in the winter. (hill)
Name of a girl who went after water. (Jill)
What the Doctor sometimes give us. (pill)
What we set plants on at school.(sill)
What we do to a fountain pen when it is empty.(fill)

Write these words on board as given. Ask children to circle the parts alike in each row. Compare the difference in sound and the fact that the vowels make the difference in sound.

(Give Each child paper).

Now write these words on your paper. Write fill, change fill to fall, now write fell, write sell, now shell, smell, write tell, now still, spill, spell, spelling, now write tall, stall, stalled, stalls, stalling.

(Ask three or four children to write their lists on Blackboard Correct any erros and confusions. Carefully check suffixes, ing, y, ed, s).

TENTH DAY

Teach rhyming words ending in ight ake.

(Paper is to be passed out to each child).

(Write the word right on the blackboard. Ask a child to tell what it is).

Now who can give a word that rhymes with right?

(As the children give words write them on the blackboard. Get a list)

Who can write bright on your paper? (Besure children write it correctly). Now write brighter, brightest, brighten.

Write light, lighted, lights, lightning, lightly.

(Check endings to be sure children understand).

Now listen to these words and see if you can tell the part that is alike in each? (Dictate and write on board)

cake mistake make snowflake

Let's give words that rhyme with these words.

Now we'll read these sentences. (Write them on blackboard).

Mother can make a cake.

Mother will wake me in the morning.

Can you bake a cake?

John can go swimming in the lake.

We rake leaves in the fall.

Boys and girls like snowflakes.

The puppy will shake the paper.

(Have children underline rhyming words).

ELEVENTH DAY

Review of word elements presented so far.

(Pass out Paper).

On your papers write these words as quickly as you can in separate rows according to rhyme. (Write words on blackboard).

shake	right	hall
light	pill	fright
wall	bake	kill
jell	thrill	yell
make	dell	small

Write the first two letters you hear in these words.

group crate shore dreary claim glider frigid blast thimble trash plaster while slacks chance

Write the last two letters you hear in these words.

watch cash breath dresses number

(Collect papers and correct later for confusions. Go over the work at the blackboard with the children. Clear up any confusions evident).

TWELFTH DAY

Teach word elements ame ay en

Who can think of a word that rhymes with these words?
lame shame (Write words given on blackboard, three or four words in each row. Ask several children to circle the ame in the words).

Now I am thinking of some words that sound like may gay tray. See if you can answer these sentences with words rhyming with may, gay and tray. Some of the words have ay in them but not at the end.
(Call on individual children to give the words and write each word on the blackboard).
The farmer cuts in the meadow. (hay)
The hen an egg every . (lays,day)
The color of an elephant is . (gray)
The noise a donkey makes is called . (braying)
February 22nd is Washington's and a . (birthday and holiday)
Let's say all the words together that rhyme. (Askchildren to circle the ay in each word).

Who can think of words ending like then? (Get words that children think of. Write them on blackboard. If children don't give these words include them in the list).

often listen kitten even open seven broken happen written given eleven eaten sudden women

Now these words have en in them but they do not rhyme. En comes in the middle or at the beginning of these words. (Dictate)

bench length plenty engineer fence enemy enjoy menu engine generous nonsense

(Ask different children to circle the en).

THIRTEENTH DAY

Teach effect of r on a in word elements.

Who can tell how to spell the word pat? (Write it on blackboard). Now can anyone write part? (Have several children write part on the board. Get other words that rhyme with part as tart, cart, dart, start, art and write in a row on the blackboard).

(Write had on the board. Get from children how to make had into hard and have it written underneath to show the difference).
Can anyone think of a word that rhymes with hard?
(Get card lard custard leopard orchard yard).

(Write am on the blackboard. Ask several children to write arm).
Now what words can you think of that rhyme with arm? (Write them on the blackboard. Get farm alarm harm charm).

(Write park on the board).
What words go with park? (Get lark, shark mark dark bark hark, spark and write them on the blackboard).

What other words can you think of that have ar in them, but don't rhyme?
(As the words are given write them on the blackboard. Suggest some of the words below).

charge farmer large army artist arctic cargo march
carpenter harbor harvest scarf scarce sharp marbles
market margin barnyard far mar

(Ask as many children as there are rows of words to circle the ar in the words).

Fourteenth Day

Teach the sound of ee ea in various word elements. Show how the sound is usually the sound of the first letter while the second vowel has no sound.

(Dictate these words and write them on the board).

sweet feed seen deep asleep teeth sheep
peel greedy engineer between beetle

(Ask children to give other words with ee. If words with ea are given accept them and write them in separate rows. Volunteer the following words to show the ea sound in longer words than they probably will think of).

uneasy conceal disease season treat leave speak grease
least leave Easter reason

(Have the ea circled in each word).

(Get words with the short sound of ea as in bread. If children do not give any suggest some to show that all words with ea in them do not have the long e sound. Use these words as a start).

weather lead feather heavy ready instead

(Ask individual children to read the words from the blackboard to help fix the sounds).

FIFTEENTH DAY

Flash Card Drill

Quick flash work with phrases containing words with elements taught. Flash each phrase very quickly. Do the work individually. This is to check quick transfer. Have the phrases printed in large letters on cards.

You may spell
taken the light
rake the hay
Ray will shake
till sparks came
enjoy the farm
night has fallen
make a frame
will pay well
two small pencils
men in a car
plenty of sights
shark frightens me
darken the hall
might sell marbles

(After drill pick out words from the phrases for practice in giving rhyming words. Call on pupils individually as a check on needed phonograms).

SIXTEENTH DAY

Teach the sound ai in word elements and le and ly at the end of words.

Today we are going to listen and talk about some more words that have two vowels together in them but have only one sound. Listen to these words and see if you can tell what sound you hear. Repeat after me. (Dictate).

braid chair wait hair mail paint paid straight tail
airplane daisy fairy pail gain main raise

What sound do you hear? Yes, that's right a. Who can tell what the two vowels are that make the a sound in these words?

(Ask several children to write words with ai in them. Get quite a list and write them on the blackboard. Have children circle the ai in the rows).

Now listen to these words and see if you can tell what letters they end with. Say these words after me. (Dictate)
dimple sample riddle wiggle middle gentle
vegetable nibble needle jingle peddle pebble

What are the last two letters?
Now who can give some other words ending the same way?
I'll write them on the board as you give them.
(Have children repeat as they are written).

Now listen to these words and say them after me. (Dictate)

lily hardly family suddenly slowly only early softly
gladly jolly quickly silently actually nearly lonely

What are the last two letters? (Have several children write ly words on the board and discuss difference between le and ly in words).

SEVENTEENTH DAY

Teach the sounds of oo as in the words broom and good.

Let us listen again today to some words that have the same sound in them. Say them after me. Be sure you hear the sound that is alike in each one. (Dictate)

cuckoo foolish loosen smooth root noontime
raccoon boot bloom bedroom tooth booming

What sound is the same in each word? What two letters say oo? (If there is any confusion say some of the words again and ask child to repeat the words. Get the oo sound).

Now listen to these words and see if you can tell the same sound in each one. See how these words sound different from the others. (Dictate)

shook football hood woolen stood looking
good cookie brook hook bookkeeper falsehood

Now what sound did you hear? (Be sure children hear the difference in the two sounds).

(Write goose on the blackboard and beside it write cook. Ask children to give words with either sound and indicate in which row to place them. Get as many as children can think of. Use words above also and get children to tell where they belong).

Five minute review of word elements taught.

(Write on board the following words and ask children to rearrange them in rows of two so that the words have some part of them alike. This is not a test but for practice. Go over the work with the children after they do it on paper).

There are two words with something alike in them and make eight rows.

deep	pail	hard	mail
eleven	jeep	game	blame
open	cream	flake	gray
dream	shake	say	custard

Eighteenth Day

Teach prefixes con per de

Listen to these words and see what is alike in each. Be sure to listen carefully and see if you can tell which part of the word is just alike. Say them after me. (Dictate)

conceal concert congress content continue contrary
control consume contain confess conversation conquer

What part is alike in each word? Yes, the con, now see if you can answer these sentences with words beginning like conference and continue.

Measles are con_____. (contagious)
Many sidewalks are made of con_____.(Concrete)
When you hide something you con_____.(conceal)
A musical entertainment with several voices is a con_____. (concert)
Canned milk that is sweet is called _____milk.(Condensed)
Sometimes when we get mixed up we are_____.(confused)
If we put two wires together we_____ them. (connect)
The Allies have just_____the Germans.(conquered)
When things are handy we say they are_____(convenient)
(Write each answer on the blackboard and compare them with the children. Have the con circled. Call attention to the fact the con is at the beginning of these words).

Now listen to these words and raise your hand when you can tell the part that is the same in each one. (Dictate)

perch perfect perfume permit permanent person
perhaps perform perish persevere perspire persuade

Say them after me this time while I write them on the board. (Ask children to circle the like part).

Here are some other words that have the same sound at the beginning. Say them after me.

defend declare deposit desire dessert decide
decay deceive decent decrease defeat delight

What sound do you hear? What two letters are they? (Ask several children to write con per de on the board). (Repeat some of the above words and ask various children to tell in which row each one belongs).

NINETEENTH DAY

Teach suffixes tion ier iest.

Who can think of some words that end like education and vacation? (Write words on the board as they are given. If children can't think of any suggest the following):

question relation conversation commotion carnation
attention invention station population

(Ask children to circle the like part).

What does the tion say in these words?
Let's say the words together.

I wonder who can write these words on the board? (Dictate)
happy happier happiest
(Ask some child who volunteers to write them).
What did _____ (child's name) have to do to change happy to happier? to happiest? (Get the fact that y is changed to i and add er and est. Ask various children to change these words with ier and iest).

easy	sorry	lazy
heavy	tiny	ugly
angry	salty	lonely
funny	dusty	sleepy
dirty	empty	early

TWENTIETH DAY

Drill on phrases containing word elements taught.

(Have phrases printed on flash cards. Flash cards very quickly to individual children for testing quick transfer of word elements taught previously).

straighten teeth
kettle nearly fell
perhaps defeat came
conceal seven cookies
dessert seems cool
each person decides
delights to perform
raise middle chair
please start softly
nibble wool sweater
lovely fairy wakes
broom sweeps clean

(After drill on phrases ask children to give words with same word elements as those in the phrases. Pick out the words children need practice on).

These particular children needed words with the following elements. ai as in straighten, ea as in defeat and each, de as in decides, ar as in start, ea as in sweater.

TWENTY-FIRST DAY

Teach the sounds of the word elements au ought and aw as in the words pause, thought and lawn.

Let's listen today to some words that have the same sound in them. (Dictate)

because August sauce haul audience sausage

Who can tell what sound is in each of those words? (Get the au sound. Repeat the words if necessary).

Now listen to these words. (Dictate)

bawl straw lawn lawyer sprawl fawn

What sound do you hear in each of these words? (Ask a child who volunteers to write because on the blackboard and then have straw written. Compare the au and aw and the likeness in sound).

Now we will have some sentences with words that rhyme with sought. See if you can tell the missing word in each sentence.

The girl _____her book to school. (Brought)
The groceries were _____ at the store.(bought)
The two boys were angry and _____. (fought)
His mother _____ it was time for him to go.(thought)
The man _____ ten fish in the pond. (caught)
The teacher _____ the lesson. (taught)

Who can spell thought? (Ask a volunteer to write it on the blackboard. Do the same with caught and compare them. Put the word elements au aw ought on the blackboard and make three lists of words the children think of. In each case have the child tell in which row the word belongs)

TWENTY-SECOND DAY

Teach word elements ou as in round, ow as in crown, and ow as in blow.

I wonder if today you can tell the sound that is in each one of these words. Listen carefully for there were several yesterday who didn't hear the sound that was alike in every word. (Dictate)

amount around count found hour house mountain
pound south thousand shout couch

What did you hear in each word? Who would like to write found on the blackboard? Put a circle around the part that says ou. (Get a list of words from the children and write them on the board).
Now listen again. (Dictate)

owl plow growl vowel power however now flower down brown shower yowl

What did you hear in each of those words? (Repeat if necessary). Who would like to write brown on the blackboard? Write now. Put a circle around the part that is alike in both words. What letters say ow in those words? (Show likeness of ow and ou. Get a list of similar words).
Listen to these words and watch carefully as I write them. (Dictate and write on the blackboard).

grow known rainbow pillow below window own owed
hollow slow arrow

What is the difference between these words and the words in the other lists? (Ask children to say the words in the several rows. Watch for any confusions).

TWENTY-THIRD DAY

Teach word element oa.

Today let's see who can give some words that have the same sound in them as these words.

toad soap roast coal boat

Who can write a word on the board that rhymes with toad? (Get road load).
Now who can think of words that rhyme with roast? with boat? Can anyone think of other words that have the sound oa in them? (If children can not think of many use the following).

oatmeal loan oars loaves hoarse oak roadster roam toasted foam roar

Game for review of word elements taught.
(Write on the blackboard the following list of consonant blends or prefixes. In another row write the phonograms, but mixed up. Ask the children to put them together to make real words).

sl ow	pl ayed
dr aw	str eet
ch ain	love ly
gr owl	con tent

Let's play a game with these parts of words. The first row has the beginning of the words and the second row the end only they are all mixed up. I want to see who can make the words the quickest. Raise your hand as soon as you are finished. The one who finished first may read his list. (Ask children to give their lists if different).

TWENTY-FOURTH DAY

To teach transfer of word elements to reading situation.

(Write the following paragraph on the board and ask the children to read it silently. Have some one read it aloud. Underline the various elements and ask children to write words with the same elements. This is not a test but done for practice in transfer).

Some girls were having a vacation at a lake. One afternoon seven of them had a party on the beach. Three of them brought pails to put pebbles in. They were having a perfect time when some black clouds started to gather. "Well, it is awful to have a shower decide to drive us away" they all said.

(Collect and correct the papers in order to find the word elements needed and the children who fail, for teaching next week).

TWENTY-FIFTH DAY

Go over the work of the 24th day with the children. Spend time with the elements especially needed. The papers showed the most mistakes were on words containing the following elements--- ow ou ought aw each ar

(Use the words from the paragraph to begin the work. Write the following words on the blackboard).

shower clouds brought awful beach party

Now let's see if we can think of some words that have the same sounds in them as these words. (Get words from individual children and have them tell in which row they belong. Write them as they are given then ask several children to circle the like element in each row).

(Next write words in two rows on the blackboard so that the beginning and end of each word is separated and directly opposite. Use the following list).

c	out	caught
gr	ow	ground
pl	aught	plow
sl	aw	slow
pr	ound	preach
str	ow	straw
b	each	bark

th	ought	thought
sh	cause	show
be	ark	because

On your papers put these parts of words together so they make a real word. You must use each part just once. Some of you may make different words from what I have but if it is a real word and you use all the parts I'll call it right. Go ahead, work as quickly as you can. (There will not be time to wait for the slowest so go over the words in a short space of time).

TWENTY-SIXTH DAY

(Write words on the blackboard for children to make smaller words out of. This is for practice in noticing word phonograms in larger words).

Let's see how quickly you can make little words out of these larger words. The one who finishes first may read his list. (Afterwards have others give their words if they differ. Use the following words).
The numbers after each word tell you how manylittle words to find in that word. Let's read the words first.

forenoon	(2)	tray	(1)
shook	(1)	preach	(2)
crate	(2)	steam	(1)
chilly	(2)	fairy	(2)
another	(2)	snout	(1)
beetle	(2)	kitten	(1)
draw	(1)	fright	(1)
mark	(2)	oatmeal	(2)

(If there is time have the children give other words to rhyme with some of the small words, especially word elements needed).

TWENTY-SEVENTH DAY

Teach word elements or ir ur er.

Will you listen today to these words? Say them after me. When we finish I am going to ask some one to tell me what letters are in each word. (Dictate)

form story hornet porch corner morning
fork horn forget short stormy tore

What letters do you hear in every word?
(Write several of the words on the blackboard).
Let's see how many words you can think of with or in them.
(Write on the blackboard as they are given. Ask several children to circle the like parts).

Listen to these words and then I'll ask someone to tell what letters are the same in every word. (Dictate)

blackbird shirt first whirl third sir
circus dirty thirsty stir birthday chirp

Now who can think of some words with the same sound? Remember the letters are ir. (Write words given on the blackboard. If words with ur or er are given accept them but place in different rows and bring out likeness in sound).

(Dictate and write these words).

burn hurt church fur burst nurse

return burn surprise curl turtle purple

(Put five or six each of the elements or ir ur er ar on the board and ask each child to write a word using one of the letter combinations).

TWENTY-EIGHTH DAY

Review word elements taught.

Today I am going to write some words on the blackboard and I shall ask one row at a time to write rhyming words under each word while the others do it at their seats. When you have finished if you thought of any word different from those on the board you may give it. (Use the following words). Let's read the words first.

shake flame pray listen harm tattle noon
ration nightgown born seat keep sell gain

(Have children say the words they have written).

Now let's think of words beginning like these. (Write following words on blackboard and ask different children to write words beginning the same-the rest of the class do it on paper).

inside continue anywhere under enjoy
person decide remain upland expect

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